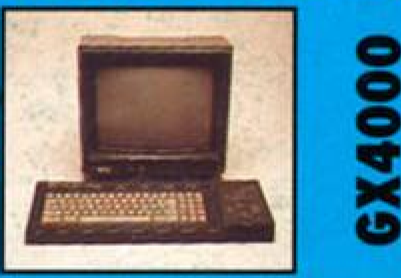
BRITAIN'S BEST-SELLING MAGAZINE FOR THE AMSTRAD

CPC



GX4000



PLUS



ISSUE No. 84
SEPT 1992
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AMSTRAD ACTION

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● **Reader calls:** Due to pressure of work, we can only accept 'phone calls from readers on Tuesday afternoons.

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July-December 1991



30

'Virtual Reality' is the buzzword of 1992, but 'real world' games have been with us for some time. We pick nine of the best from the *AA* archives...

...AND we take a look at this whole VR business. What is it? How does it work? And what are the spooky implications for the future?

Watch this Cyberspace...!



46

Hideous

Only wimps need maps, we said... and then we played *Hideous*. Alternative's new maze game is the size of a house and tougher than a week-old buttie. The plot? Oh, you have to drive around collecting bits of lead shielding to go round a reactor... *look, why don't you just read the review?*

Colour printing

28

Fed up of black-and white print-outs? Here's your guide to colour printers (the Star LC200), software (*Colourdump 3*) and colour printing in general.



Brunword ROM

24

A word processor, spellchecker, database and advanced printing system – all on a single ROM...

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Too good to be true? Well turn to page 24 to find out!



12

Action Zone

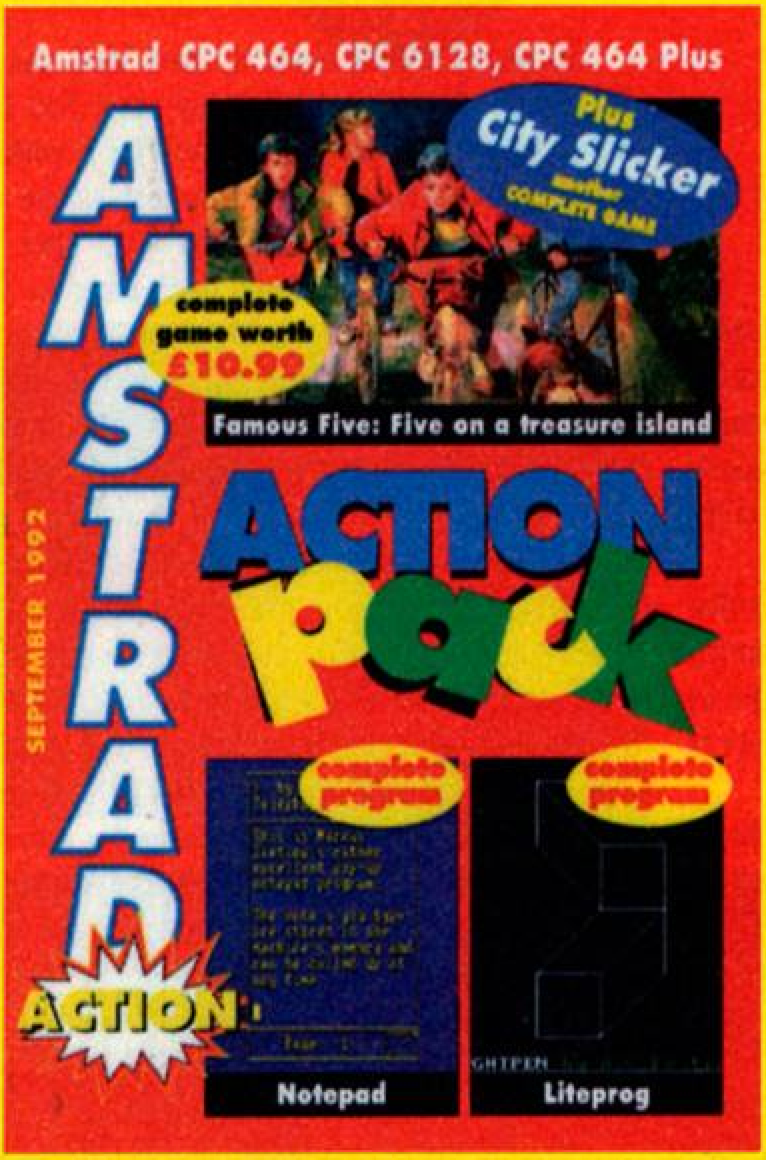
It's chillin'. It's illin'. It's beepin', boppin' and brillin'. (*Er, Rod? – Adam.*) Maximum respect is due. Safe and sorted. (*Yes, but what is it? – Adam.*) It's heinous and egregious and... (*what is it? – Adam*). It's a new section featuring games news, readers' art, interviews and more (*finally – Adam*).

serious

games

regulars

ACTION pack



- ***Famous Five: Five on a Treasure Island*** **– the complete version is yours on this month's tape!**
- ***City Slicker*** **– Another full game, this time a rather jolly collect-em-up where you have to save the Houses of Parliament...**
- ***Notepad*** **– Make notes as you work, using this ingenious little 'pop-up' utility**
- ***Liteprog*** **– The lightpen drawing program that goes with this month's hardware project**
- ***Type-Ins*** **– All the readers' programs from *AA82* – MFFILE, LEDGER and STAR DODGE**
- ***Pokes galore*** **– including routines to help you cheat your way through past *AA* covertape games**

HOW TO LOAD YOUR COVERTAPE

Side 1 of the tape contains NO MENU, just the *Famous Five* game. Type RUN" (followed by RETURN) and press a key to start the tape. (A short-cut way to get RUN" is to hold down CONTROL and tap the small ENTER key.)

Side 2 contains the rest of this month's programs and feautres the usual menu screen. Again, type CONTROL AND ENTER to load it. Press SPACE to highlight the program you want followed by RETURN to load the program.

Note that the BASIC progams (everything apart from *City Slicker*) must be loaded direcly from BASIC with the RUN"[filename]" command.

* If you have a disk drive connected to your machine you'll first have to type |TAPE to switch the machine to tape loading. (The | is obtained by pressing SHIFT and @)

program details over the page

Disk owners read this!

The covertape contains its own tape-disk copying program. However, for various technical reasons, *Famous Five* WILL NOT TRANSFER TO DISK. All the other programs this month, however, will.

Anyone who wants a disk version of *Famous Five* will have to order the *AA84* disk from Ablex. This version of the game also has graphics (the tape version doesn't).

If you select the TRANSFER TO DISK option from the menu screen, follow the on-screen instructions and press a key when the computer asks you to. It's as simple as that!

If you have problems you'll be asked to rewind the tape and try again. If so, don't panic – follow the advice for tape loading troubles. Still no luck? Then Ablex will replace your tape. See overleaf.

disk offer

Owners of the 6128 Plus are unable to connect a cassette recorder to their machines. If these or any other users would like a copy on disk, simply snip off the coupon on the corner of this page and send it with a cheque/PO for £2.00 made payable to Ablex Audio Video Ltd to:

AA84 disk offer, Ablex Audio Video Ltd., Harcourt, Halesford 14, Telford, Shropshire TF7 4QD.

disk 84 TOKEN

1 Famous Five: Five on a Treasure Island

Loading: *Famous Five* takes up the whole of side one of this month's covertape. It has its own loader, so don't expect to see the now-familiar Menu screen. Instead, the program loads straight in.

This, dear readers, is a historic moment. Historic partly because this is the first time we've put an adventure on the *AA* covertape and partly because it revolves around the antics of a gang of goody-goody kids first made famous by Enid Blyton in the '50s.

Playing *Famous Five* takes you back to another world. A world without acid rain and urban deprivation, a world where everything could be put right by calling the coastguard and ordering a giant plate of macaroons.

You start off in a train pulling in at Kirrin Village. This is where you're going to spend your summer hols with Aunt Fanny and Uncle Quentin, and cousin George. You soon realise, though, that there's a mystery to be solved. A mystery involving Kirrin Island and buried treasure…

Famous Five isn't just any old adventure, though. Owners of the disk version (available from Ablex) get graphics (impractical on a tape version), but everyone gets a rather special adventure that would, by the way, have cost you heaps of moolah if you'd bought it (hem hem).

So what's special about it, then? Well, you can actually change characters at any point. Fed up of being Julian? Well why not be Dick for a while, or Anne, or George. It's more than just simple role-playing, though, because you can get the characters to co-operate with each other to solve problems.

Apart from that, you can do all the usual adventurey things, like heading North, South, East, West etc. You can also Follow people and even Ask them things.

Anyone who's ever played an adventure will get the hang of it straight away, but for those who haven't, it works like this: any adventure consists of a series of 'locations'. Each location is described by the program when you enter it. And some locations may contain 'objects' which you should pick up, as they will undoubtedly come in useful for solving a puzzle, sooner or later. You move from location to location by typing in the direction you want to go, while you pick up objects by saying GET [object].

You can form more complex commands too. For example, you might want to GET OARS, then ROW BOAT WITH OARS TO KIRRIN ISLAND.

Other people can be questioned with commands like ASK UNCLE QUENTIN ABOUT THE CANDLE. Now Uncle Quentin hasn't got much time for you kids, but someone else might provide some useful information when asked.

If you're feeling bossy (Julian is a bit bossy) you can TELL people to do something. Finally, if you want to know more about something you find, you can EXAMINE it.

- **For a full list of verbs and special commands, type VERBS.**

Anything else you need to know? Oh yes, it would help to know a bit about your character's strengths and weaknesses, wouldn't it?

Julian: "The oldest and the most intelligent. He is also quite strong."

Dick: "The greediest and has the thinnest build. He is also quite strong, but perhaps not as strong as Julian."

Anne: "The youngest. She is also the weakest and the most easily scared. Anne tends to look up to Julian."

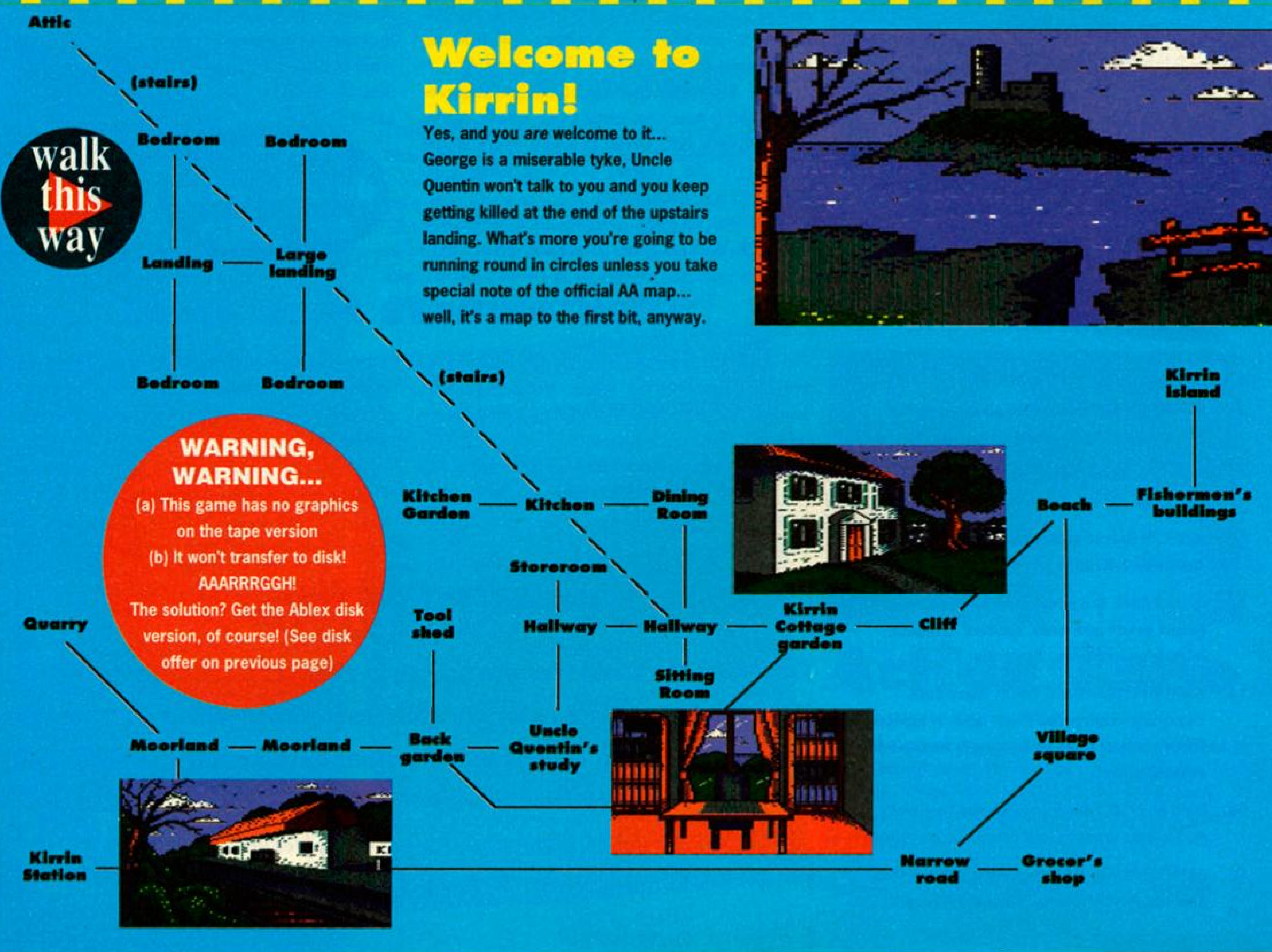
George: "The bravest and has a quick temper. She likes to be treated as if she were a boy and is the best swimmer. George can be difficult at times."

So why do you need to know all this? Because you might have to pick the right character before you can solve a puzzle, that's why… Good luck!

• *Famous Five* controls
Keyboard only (input commands)

Welcome to Kirrin!

Yes, and you *are* welcome to it… George is a miserable tyke, Uncle Quentin won't talk to you and you keep getting killed at the end of the upstairs landing. What's more you're going to be running round in circles unless you take special note of the official AA map… well, it's a map to the first bit, anyway.



WARNING, WARNING…
(a) This game has no graphics on the tape version
(b) It won't transfer to disk!
AAARRRGGH!
The solution? Get the Ablex disk version, of course! (See disk offer on previous page)

2 City Slicker

walk this way

To get anywhere in London (as everyone knows) you need to use the Underground. But first you have to find a station. Here's how...

Loading: ***City Slicker*** **is the first program on side 2 of the covertape. Rewind to the start of this side, then press CONTROL and ENTER to load the standard menu.**

"An urgent newsflash today told of a plot by an evil terrorist gang who masquerade by the name of Abru Caddabra. It is understood that a bomb has been timed to go off precisely at midnight in the Houses of Parliament. The bomb, which is though to be an Acme99 series plastic explosive, can only be defused by the Acme Bomb De-activator Unit (B.D.U.).

"In Slick's race against time, guide him through London in order that he may find the various components which go together to make up the Acme B.D.U. They can be assembled in his workshop quite easily, but actually finding the parts will be the hardest part of his exercise. Also it is imperative that you keep Slick at a suitable distance from Abru, because the Arab carries a deadly potion which will kill Slick should they meet."

Well that's the scenario... are you any the wiser? No, probably not. Basically, *City Slicker* is a platform collect-em-up filled with timing puzzles and exploration. Just to make things a bit easier for you, though, we're printing a map to show you the way from the start to the nearest tube station. From there, the world (well, London) is your oyster!

• *City Slicker* controls
Keyboard or joystick control

Q, joystick left	Left
W, joystick right	Right
Spacebar, joystick up	Jump
J, joystick Fire	Pick up
A, joystick down	Put down
Enter	Sound on/off
Esc	Pause game
CTRL+R	Restart game

You can't kill these – all you can do is stay out of their way. This one does do something useful, though. He keeps hitting that lever to his left and opening/closing the door that leads off the screen.

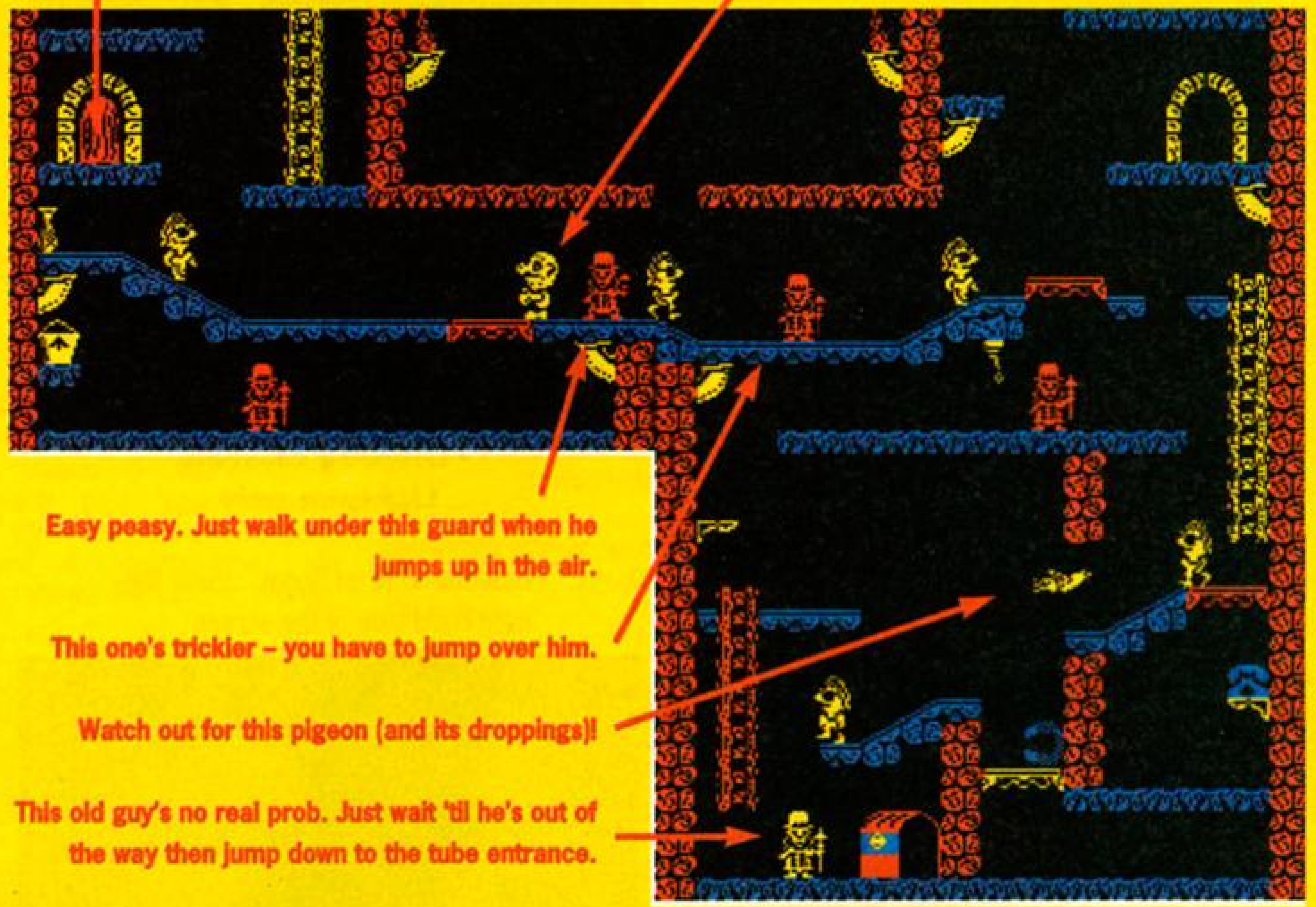
This guy is Abru Caddabra. He carries a little pot of poison and tends to follow you round London... so keep your eyes peeled.

This is you – the guy with a big head and a body like an England rowing cox.

We're not too sure it's worth going down here. We never managed to get out again when we did. But that might be because we're cr... *(oi – we get told off for using that word – ed)*

This guy is Ed Butt. He's obviously a mate of yours 'cos you can pick him up and carry him around! Not sure what he does, though...





Easy peasy. Just walk under this guard when he jumps up in the air.

This one's trickier – you have to jump over him.

Watch out for this pigeon (and its droppings)!

This old guy's no real prob. Just wait 'til he's out of the way then jump down to the tube entrance.

READ THIS!

This month's covertape is put together a bit differently, and you should take special note of the following:

1. *Famous Five* takes up the whole of side 1 of the tape. There is no menu on side 1 this month.
2. *Famous Five* WILL NOT TRANSFER to disk. If you want a fully-working disk version of the covertape, you'll have to order it from Ablex.
3. *Famous Five* is text-only when run from tape. This is because it's impossible to load all the graphics into RAM, and no-one wants to have to keep rewing tapes to load graphics in every few minutes! The Ablex disk version of *Famous Five* DOES have graphics, however.
4. All the other programs are on side 2 of the tape. This features the usual *AA* covertape menu. All the programs on side 2 transfer to disk as usual.

TAPE WON'T WORK?

We go to great lengths to make sure that our covertapes work properly. They are checked directly after the master copies are made and then again once Ablex, our duplicators, have run off a series of test tapes. Only when we give the final go-ahead are the tapes on the front of the magazine actually produced.

However, a few of you may still have difficulty. If so, the problem may be with your equipment. Try the following:

● Try loading at several different volume levels if you're using an external tape recorder. Computers can be fussy about the volume they will load at.

● Clean the tape heads. This can be done with any commercially available cleaning kit. Or else use a cotton bud soaked in alcohol. Gently rub the surface of the heads and pinch roller to remove that layer of accumulated grime.

● Adjust the cassette recorder's head alignment. The alignment screw is located just to the left of the tape head, and is usually accessible through a small hole. Rotate it a fraction at a time with a jeweller's screwdriver. When the crispest sound is heard, the alignment is spot on.

● Sometimes the tape spools can jam or stick at a critical moment. Check the spools in your cassette rotate freely, if necessary giving the casing a slight tap against a table edge just to make sure.

If, after trying the all of the above, you still can't get the tape to load then you can return it for a replacement. Send the tape, along with a brief description of the problem with an SAE to:

AA84 Covertape Returns,
Ablex Audio Video Ltd,
Harcourt,
Halesford 14,
Telford,
Shropshire TF7 4QD

3 Notepad

complete program

Loading: *Notepad* is the first program on side two of the tape and must be run from BASIC. Rewind to the start of side 2, then type RUN"NOTEPAD.BAS to load it.

Notepad prints brief instructions on-screen when you RUN it, so there's not much we need to tell you! There's not much to say, either, since it's an extremely simple yet effective utility.

What it does when you first RUN it is set up an RSX (Resident System eXtension). This is a program which is installed in the machine's RAM and can be called up at any time using a bar (|) command. In this case, you call it up with |NOTEPAD.

Using *Notepad* you can jot down messages to yourself whatever you're doing. Later on, you can recall them simply by typing |NOTEPAD again (the text you write is saved even when you clear the notepad – it's only lost when you switch off).

There is just one thing to look out for, though. *Notepad*, like any other RSX, pinches a bit of the machine's memory for itself – and relies on no other program trying to use that same bit of memory. You'll usually be OK, but if you do run into problems and you're a dab hand at programming, you may be able to relocate the code somewhere else.

• *Notepad* controls
Keyboard only

CTRL+E ....Return to BASIC
CTRL+V ....Forward one page
CTRL+Z ....Back one page
DEL ....Erase character to left
CLR ....Erase char under cursor
Up arrow ....Cursor up
Down arrow.............Cursor down
Left arrow ....Cursor left
Right arrow................Cursor right
Return..Cursor to start of next line



■ Simple but brilliant: a pop-up notepad. It doesn't do anything fancy like word wrap (*or spelling – ha ha – ed*) but it's triff for jotting down notes.

4 Liteprog

complete program

Loading: *Liteprog* is the second BASIC program on side 2 of the tape. To load it, rewind to the start of the tape and type RUN"LITEPROG.BAS"

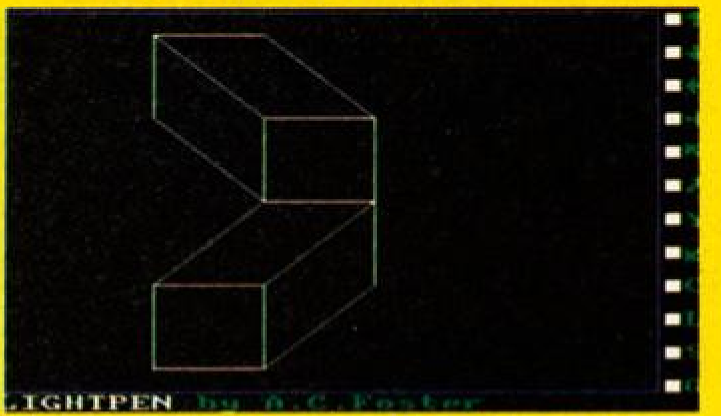
Liteprog is the program that goes with this month's hardware project (see page 22). It's a pretty basic but nonetheless effective little drawing package that uses a home-made light pen to draw horizontal, vertical and diagonal lines on-screen.

You do this by pointing the lightpen at the appropriate icon to the right of the screen. Apart from the drawing functions there are also icons for loading pictures, saving them and clearing the screen.

There's only one proviso – for the lightpen to work properly it needs a colour screen with decent brightness.

• *Liteprog* controls
Lightpen only

Use the row of icons down the right hand side of the screen



■ Looks good, doesn't it? Well you can't use it 'til you've done this issue's hardware project, so there!

5 Type-ins

readers' programs

Loading: *AA82's* Type-ins are on side two and they must be run from BASIC. Type RUN" and the relevant filename (printed in bold below)

LEDGER.BAS Having trouble working out where all the money goes? This handy accounts prog from Paul Heffernan could be the answer. (It won't stop your cash disappearing, though.)

MFFILE.BAS David Madden is a bit of Multiface nutter, and his black box pokes database should be a boon to other Multiface nutters everywhere.

STARDOGE.BAS A basic, but pretty (and playable) little arcade game.

6 Pokes

games pokes

Loading: The pokes are on side two and they must be run from BASIC. Type RUN" and the relevant filename (printed below). See Cheat Mode (page 51) for more.

AA79COVER.GS Rune-sorting help for *Ranarama* and infinite lives for *Maze Mania*

AA80COVER.GS Infy lives for the *Stryker* demo and *Anarchy*

A81COVER.GS Good grief! – infinite lives for *Forbidden Planet* and the *Addams Family* demo

ANARCHY.PH This *Anarchy* poke gives you infinite lives *and* invulnerability...

ATLANT-1.GS Inflives for *Superkid*, *Spooky Castle*, *Crack-Up* and *Crossfire* (*4 Game Pack 1*)

ATLANT-2.GS Atlantis's *4 Game Pack 2 – Gunfighter*, *Snowball in Hell*, *Skatin' USA* and *Periscope Up* – gets goodies galore

SPINDIZY.RY A teleport-type cheating system for this AA covertape effort of yesteryear...

SWEEVO.PH Infinite lives for covertape game *Sweevo's World* – hurrah!

AA SMALL ADS

For Sale

MEGADISK! 15+ Utilities including Database, Bank Manager, Character Designer, File Header Reader and Archiver. For your copy, send SAE, Disk and £3 to: 88 Bedford Road, Letchworth, Herts, SG6 4DU.

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FD1 DISK Drive £50. Rombo ROM box with Protext and Prospell, £30. DK Tronics Lightpen (ROM version) £15. CTM640 Colour monitor, £30. All items for CPC464. Ring (0722) 325594, weekends.

AMSTRAD CPC464. Green screen with TV Modulator, joystick and a small box of mixed games, £100. Phone (081) 568 4758. (Twickenham)

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CPC 6128 joystick, mouse and mat, Multiface 2, tape deck, games worth over £550, Advanced Art Studio, Brunword 6128, colour monitor, manual, printer lead, £285. Tel Tunbridge Wells (0892) 527773.

AMSTRAD CPC464 mono monitor, 2 joysticks, £250+ games, 12AAs, TV Modulator, will sell for £110. Tel Rochdale (0706) 524163 after 4 o'clock.

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AMSTRAD 6128, colour monitor, Disk drive, tape deck, all leads, instructions, manuals, over £50 worth of AA mags, 100's of games, software and programs, all this and more for a bargain at £250 o.n.o. Call anytime on (051) 639 4059.

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AMSTRAD TAPE games for sale. 250+ titles mags, tapes £150 or sell seperately. List available. Games from 50p, Turrican Lez, Dizzy games, Prince of Persia. Tel Robert (0562) 66110.

DATAPHONE Designer Modem plus K.D.S Electronics Serial Interface with Comms Pack 5 software. Boxed/Manuals/Cables. £90 o.n.o. Also CPC cassettes/disks/books for sale. Phone for list. Tel (071) 822 3727 (Roger).

AMSTRAD 464 complete with disk drive, memory upgrade, colour monitor. Over £200 worth of software, VGC, £400 o.n.o. Dave (0608) 658396.

Other

WANTED. NZ PD/Shareware library wants your original work. Program of month gets NZ$20. Please send 2 IR Coupons if you want disks/tapes returned. Send to: PD LIB, 1/79 Luanda Drive, Ranui, Auckland 8, New Zealand.

LISTINGS, LOTS of them on 3" disk. Mostly games or Graphics, some from 1985, for £3 only. From Angela Allum, 22 Point Royal, Bracknell, RG12 7HH.

PAGEMAKER DELUXE Desktop Publisher for the 6128/664+64K. Features: Stop-Press, Clip-Art compatible. Word processor, text import, and more. AA verdict 93%! Special price: £2.95 + disk and SAE. Send PMD, PO-Box 435, Glasgow, G12 8SG.

AOK FANZINE 40 pages including programming, PD listings, hints, more. £1 UK, £1.50 EEC, £2 elsewhere. Cheques payable to Vision please, at 155 Haslucks, Green Road, Shirley, Solihull, West Midlands, B90 2LG.

WANTED - DDI-1 CP/M 2.2. Phone Ciaran (0384) 397452.

AA SMALL ADS

This section offers you a really cheap and effective opportunity to speak direct to 35,000 CPC owners – or would-be owners. Users report excellent results.
You can place an ad up of up to 30 words for just **£5**.

So you could use it to sell a printer, launch a user group or advertise a piece of software you've written.
One thing you can't advertise is the sale or swap of software. Such ads can be misused by pirates.

Fill in the application form and send it to us together with payment.
We'll place the ad in the next available issue (published 2-7 weeks after we receive your order).

ORDER FORM

SEND TO *AA* SMALL ADS, FUTURE PUBLISHING LTD, BEAUFORD COURT, 30 MONMOUTH STREET, BATH, AVON BA1 2AP

Please place the following advertisement in the next available issue of *Amstrad Action*

Name ______________________

Address ______________________

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Telephone ______________________

I enclose payment of £5.00 by Cheque/ P.O/ Access/ Visa

Credit Card number ______________________

Credit Card expiry date ______________________

Classification. Tick box: ❑ For sale ❑ Wanted ❑ Services ❑ User Groups ❑ Other

Write your advertisement here, one word per box. Include your name and phone number if you want them

reaction



ADAM PETERS has gone soft. No more does he cruelly savage the pompous and the pimply. No longer are his letter replies cuttingly cynical and the readers' letters cynically cut. He's gone all responsible on us. Write to: *Anne Robinson, Reaction, Amstrad Action, 30 Monmouth Street, Bath, Avon BA1 2BW*. Provoke him!

OH NO, ANOTHER ONE...

I have just completed dealings with a company that advertises in your magazine that encompassed a period of nearly 5 weeks from the day my cheque was cashed. I sent a cheque for £50.13 on February 16th, ordering four manuals, pack of 10 ex-software house games disks and a bundle of software.

March 5th arrived, the items ordered didn't, so I rang the company and was told by the owner's wife that the goods were dispatched on February 28th, according to her postal receipts. By March 12th the goods had still not made an appearance, so I rang again. The same woman stated the order was dispatched on March 2nd, but as I had not received it they had run out of the stock of manuals but she would send the game pack separately. I agreed to this proposal, but by March 18th still no parcel. You may assume, by this time I was extremely suspicious of the company. I then phoned my local Parcel Force distribution depot and spoke to a Mr J Lynn, the manager...

[A couple of paragraphs cut here, where Coley explains that the package arrived on March 30th, bearing £4.50 worth of postage and wrapped in an old game poster with two strips of brown parcel tape round it. He had been charged £10.60 post & packing. A few other things were amiss, and Mr Lynn is doing some investigating]

All in all, the items are very over-priced from the postage point of view. None of the manuals would cost more than 40p to post, this has been checked with the Post Office. Therefore, could you mention in *AA* that I will copy any of my manuals for interested parties, charging for the cost of copying and postage alone. The most expensive one being the 'Service Manual Amendment' which would cost £6 as it runs to some 68 pages to copy, plus the wrapper and postage, say a further 50p.

I could not leave this mail order company without participating in a charade which caused them a little of the hassle they had caused me with the lies they told. I will not bore you with the details, suffice to say it gave me a great deal of pleasure.

G E Cole
Norwich

Adam: Oh dear. True, you have been dealing with a company that suffers from bouts of inefficiency. (Back in 1989, I spent three months chasing up an order of my own from the same company.) It should be pointed out that legally companies are allowed 28 days for delivery from the time they receive the money (ie once the cheque has cleared). So in fact the company were only a few days late in supplying your order, and most people wouldn't have even thought to start chasing them up until a month had passed. Apart from your over-keenness and a few silly complaints about un-guaranteed games, some of which didn't work (you paid about 16p each for them, for God's sake!), most of your complaints are certainly justified.

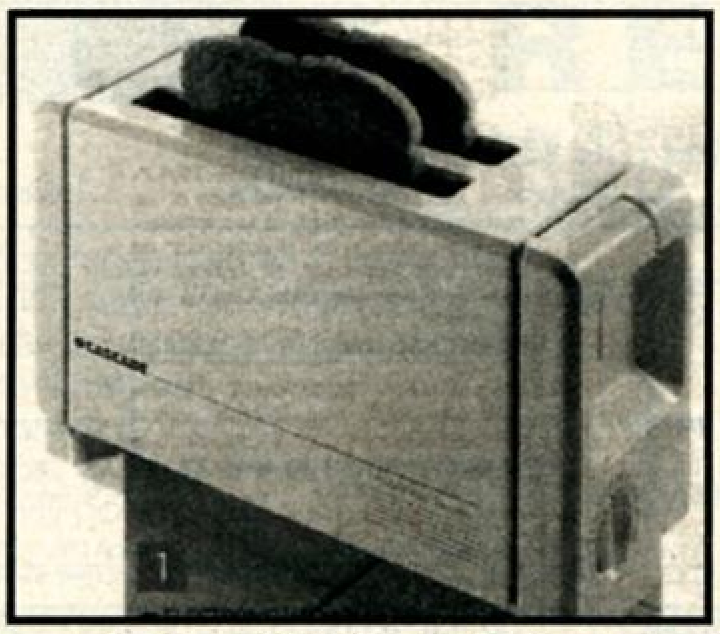
It is the end portion of your letter that sees you become this month's *AA* Idiot/Madperson of the Year entrant, though. After taking a high and mighty tone over a late delivery, you spoil it a little by announcing your intention to illegally reproduce copyright material. The last paragraph is worrying too, since it seems to indicate you also participated in either nuisance calls or fraud, both also blatantly illegal if not a little childish. If this letter were from a 12 year old, we might be able to laugh it off. It appears to be from a 'grown-up', which is very sad indeed. Two more fools to come in *AA85* and *AA86*...

BIT SIZE

My mum is a friend of the man who invented the Breville toaster.

Daniel Johnson
Leytonstone, London

Adam: Er, well done Daniel's mum's friend.



■ **Modern bread-burning technology, courtesy of Daniel Johnson's mum's chum.**

BAGS HAVE RIGHTS

Have you ever noticed how bags are treated in schools today? People just throw them around as though they don't have any feelings. THIS HAS GOT TO STOP! Remember, bags have rights. What's more, if the attitude towards bags doesn't change, Lard will not be too pleased. You have been warned.

John Harrington
Horley, Surrey

Adam: John writes us two or three letters a month. His doctor has advised us to print at least one letter from him every twelve weeks, just to be on the safe side...

FIGHT THE POWER

I am writing to ask you and your 37,000 readers some questions about the current software situation. You may have noticed that almost every software house in this country has pulled out of the Amstrad full-price market. Why does nobody seem to care? *Amstrad Action* seems to be being very quiet about the lack of software and a rival magazine seems to be actively encouraging the CPC's demise with coverage of Sega and Nintendo machines. All Amstrad CPC/Plus/GX4000 owners are being far too quiet (I'm sure that if 37,000 people sent a letter to Ocean complaining about them dropping all full-price and cartridge releases, Ocean might think a little differently). Please, please, please don't let the Amstrad die. I know that you (Adam) are a fan of large public disturbances, so some kind of action over this problem should be right up your street!

James Bridges
Silchester, Berks

Adam: I don't think *AA* is being quiet about the lack of software at all, Jimbo. Over the past few months we have always pointed out when a software house has decided to drop the Amstrad (and chastised the softie in question accordingly). You're right though, something definitely does need to be done about the situation. Next month in *Action Zone* we outline the *AA* plan to get the softies to sit up and take notice of how many CPC owners there are.

FLAT FOR SALE

I'm so upset! I've been washing the cat and brushing my face for weeks! I'll explain in just a minute →

3.5" Mega Drive £79.95

(Including FREE MS800 and 10 free disks)

FEATURES

- ★ 800K per disk when used with MS800 (supplied FREE), RAMDOS, ROMDOS, or RODOS.
- ★ DUAL MODE: Mode 1.—The Mega Drive is a complete alternative B drive. Mode 2.—The Mega Drive will also format up to 800K per disk
- ★ SIDE SWITCH switches the disk between side A and side B of your 3.5" disk.
- ★ EXTERNAL PSU. the power supply is external, and should the need ever arise is easily replaceable.
- ★ MULTI-COMPATIBLE The Mega Drive is compatible with almost all other computers, so that if you change computers you can transfer your MegaDrive. Only a different lead and connector required.
- ★ COMPACT SIZE The Mega Drive measures only 7" x 4" x 1".
- ★ RELIABLE The Mega Drive uses the most reliable TEAC mechanism, and assures you of trouble free operation. Full 12 month RTB guarantee.

FD1 Disk Drive £79.95

Overseas Orders Welcome

MS800 - the STANDARD in 800K storage................£9.95

MS800 enables the Dual - Mode disk drive to store up to 800K per disk. Since it was introduced in 1991 it has become the biggest selling software of its kind, by far. So much so that many people have converted their earlier 3.5" and 5.25" drives to dual mode capability, and switched to MS800.

FEATURES INCLUDE;-
360K, 400K, or 2 x 180K per side. Compatible with all CPC's and CPC+'s CP/M+, MF11, Stop Press; and all other software. 64 or 128 directory entries; verify disk; disk copy; file and batch copy. Unlike most alternatives each disk initialises the computer for its own format without using up any of the storage space. Once a disk has been formatted, MS800 itself is not needed.

Formatting up to 400K each side needs a SIDE SWITCH on the drive. We can supply a side switch and simple fitting instructions, suitable for 3.5" or 5.25" disk drives

Side Switch with instructions £3.00

SPECIAL OFFER
50 X 3.5" Disks & Disk Box
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MP3 TV Tuner £29.95
CT1 Clock/Radio/Alarm.......................................£14.95
MP1 S (Scart/Pertel) £29.95
MP2 S (Scart/Pertel) £39.95
MP3 & CT1...£39.95

MAXIDOS (with FREE PROCOPY)—£13.95

THE MOST COMPREHENSIVE & EFFECTIVE GENERAL DISK UTILITY AVAILABLE FOR THE CPC

MAXIDOS is fully compatible with RAMDOS, AMSDOS, and CPM formats.
COPY files/disks; VERIFY disks; RESURRECT erased files;FAST FORMAT Amsdos/Ramdos/Romdos; IDENTIFY format; CAT files (including erased ones) optional status/address/length/etc; ALTER user areas; MAKE/UNMAKE system or read only; DISPLAY or PRINT files ....and MUCH MORE. BEST sector editor EVER for the CPC. All standard editing facilities, PLUS file mapping to screen or printer, auto step by step movement through a file, string and byte. SEARCH through file/disk. FILE ARCHIVER backs up disks to tape; variable baud rates. SPEED up your disks! Unique optimise, re-arranges your crowded disks, making them load up to 50% faster.

Trade Enquiries Welcome

BONZO SUPER MEDDLER.........£13.95
now includes the BONZO HACKPACK - FREE! The most comprehensive tape to disk utility. Supplied on disk with a huge database of verified transfers. Produces stand alone transfers.

BONZO BLITZ...........................£13.95
now includes BONZO'S DOODAH and 4 adventure games - FREE! Tape to disk transfers. Deals with all forms of SPEEDLOCK. Works on all CPC's and produces stand alone transfers. Huge database of verified transfers.

BONZO BIGBATCH.....................£9.95
FAST, FLEXIBLE database. Superb football pools predictor, plus a user friendly memory saving SCREEN & SPRITE DESIGNER.

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"The best all round BASIC extension program" WACCI. FLASH BASIC adds around 70 extremely useful RSX's to use in BASIC programs. The resulting progs will run on any computer without the presence of FLASH BASIC. Includes a database and other excellent example programs.

ABBA Switch (6128/664)....£12.95

6128 ROM £24.95
3rd drive switch (6128/664) £12.95
(Including fitting instructions)

FILE TRANSFERS
CPC To/From PC's, PCW's and Others
2 in 1......£24.95 MFU £29.95
(Both programs run in CPM+ NOT CPM 2.2)

464/464+ OWNERS
Want a DISK DRIVE? Cannot find a DDI-1?

Exchange your 464 for 6128.................................£129.95
Exchange your 464+ for 6128+...............................£99.95
It's cheaper than buying a DDI-1, Rampack, & ROM

OTHER ITEMS

3.5" Disks (Mitsubishi Branded) (10)	£7.95
3.5" Disks (Ex Software House) (10)	£5.95
3" Disks (Amsoft) (10)	£19.95
3" CF2 Disks (Branded Bulk) (10)	£15.95
Plastic Cases for CF2 3" Disks (10)	£5.95
3.5" Disk Box (Holds 50)	£7.95
3"/3.5" Disk Drive Head Cleaner	£4.95
Printer Lead	£7.95
64K DKtronics RAM PACK	£39.95
6128+/464+ Adapter	£9.95

GVL MICROFORM

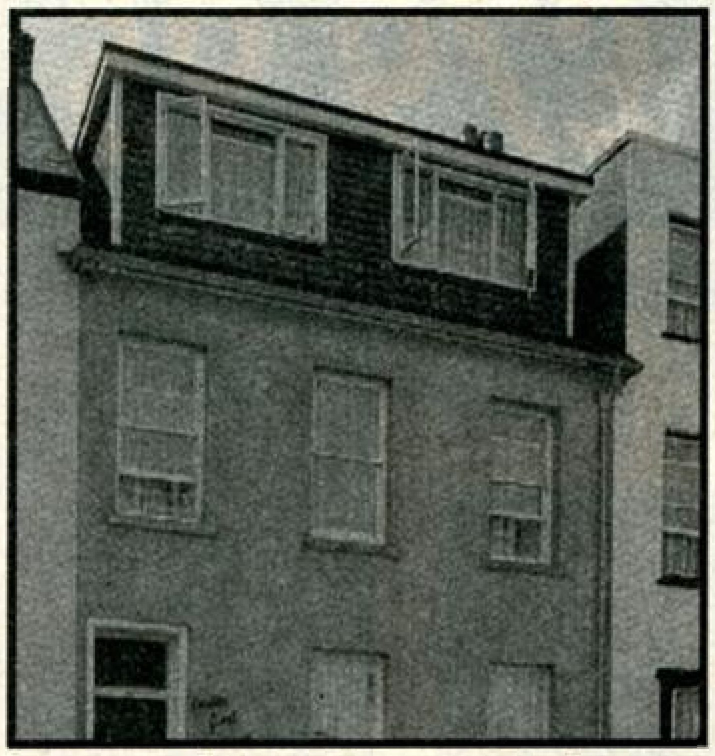
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■ **Here's a flat that's probably not totally dissimilar to the one you can buy off C Scott for a very reasonable £21,000.**

when I manage to climb out of this pile of soggy hankies... (oof!)... that's better!

You see, I subscribe to *AA* every month, but hubby and I have had our house up for sale since February and no-one's bought it yet! I know that really won't concern you, but because we wanted to make the house look like a three-bedroomed semi instead of a one-bedroomed flat, we sent our CPC464 and CPC6128 up to maw-in-laws for a holiday. Little did we know the holiday would last six months (waaah)!

As a result, we're going through acute withdrawal which gets worse with each copy of *AA* and its free covertape that plops through the mail-box (sniff, tremble).

Please, please make someone buy our house (well, flat actually). It's very nice and only £21,000 complete with carpets, fridge/freezer and cooker (a steal really!). Maybe you could send Rod up here to get rid of him for a while? (*Oi, I heard that! – Rod.*)

It's in the lovely seaside town of Gourock, Scotland. It has lovely views as well... if it isn't bought soon I'm going to scream and scream till I make myself sick 'cos I WANT TO PLAY WITH MY COVERTAPES! (Snivel, snivel, whine...) I'm not asking for much, am I?

PS I can't even play at maw-in-laws 'cos the CPCs are in the attic! (Oops, I just fed the milk bottles and put my son on the doorstep! See what I mean?)

C Scott
Gourock, Scotland

Adam: Aw, what a sad story (sob), it brings a tear to my eye. I'd buy the flat myself Cucumber (*remember to put your full name on letters, readers – ed*), but I've only got a tenner. Come on readers, put Mrs Scott out of her misery. Drop us a line here at *AA* if you'd like to buy this undoubtedly fab flat (at the knockdown price of £21,000) and we'll pass all the letters on to the Scotts.

Incidentally, if anyone else would like to try and sell their house through *Reaction*, send details of the location and specifications/facilities, together with your asking price to: *All Estate Agents Are Thieving Crooks (Allegedly), Amstrad Action, 30 Monmouth Street, Bath, Avon BA1 2BW*. Cheers.

maryanne's mail



It's been an extremely busy month for me (world corruption and domination is a tiring business) so let's get down to some serious letter answering.

"Dear AA posse (not Maryanne), I am writing to tell you of a horrific discovery I have made concerning Maryanne. Make sure she does not find this letter (too late – Adam), because she will stop at nothing to achieve her evil aims. Maryanne is the perpetrator of a scheme that will relegate the CPC to the proverbial scrap-heap. She wants all 464s replaced with Amigas and all 6128s with Sinclair QLs.

"Just a peek at Maryanne's Mail will show you how her influence has already spread. Nobody not permanently warped by her insane ravings could write in to offer her support. Even now I struggle against the insanely terrible urge to fling my CPC through a window and drag my senile old Vic 20 out of the attic.

"The soft, fluffy Maryanne bears as much relation to her real self as a rather squishy pear does to a lump of a certain reeking substance on the floor. Keep a close eye on her. See how much effort it requires for her not to snatch up and play the latest Raw-Meat-Blood-Dripping-Shoot-Em-Up, how much it costs her not to smash all her little kittens and bunnies (bleurgh!) to fragments under her hobnail jackboot.

***"You (yes, you!) must make sure her dreadful scheme cannot succeed."* Rachael Munns, Wales**

Hmm... Tell me Rachael how long have you been suffering from these paranoid delusions. Now I want you to calm down, take a nice deep breath, slowly breathe in and out. That's better. Just why have you fixated your fears for the future of your CPC on to me? You can't really believe that little old me could single-handedly be responsible for all AA readers trashing their CPC's for something else. You must think I have tremendous influence. I guess that's kind of a compliment. There is good in everyone (somewhere).

***"What do you think of Lemmings, Maryanne?"* Amy Kernahan, Somewhere**

I think *Lemmings* is great. It's so refreshing to find a game where the object is to save lives rather than to destroy them. *Lemmings* has been a very successful game across all the games machines. Which goes to prove my point conclusively, games don't have to consist of killing/bashing/disabling opponents.

***"Dear AA, If you stop torturing Maryanne and buy her a cute, fluffy (bleurgh) rabbit to keep Hugo happy, she might stop sticking flower petals on Machine Guns Illustrated."* Ben Reynolds, Wales**

Buy me a fluffy bunny, huh, they didn't even get me a leaving present. Not a thank you for all my hard work, not one word of congratulations on my promotion, nothing. But thank you Ben, Hugo is perfectly happy now in his new home at *Sega Power*, he has settled in nicely, made friends with the team and is enjoying a new found freedom to roam the rather spacious office.

Keep those letters coming,

Maryanne
XXXX

AA VOTE-IN

FLUFFY ANIMALS vs LASER DEATH

Yes, it's the reader vote-in you've all been waiting for. Maryanne thinks that games shouldn't involve mindless killing, she's a big fan of fluffy animals, and she thinks that if everyone is nice to each other, the world will become a much better place. Some of you agree with her. Others of you reckon that she's just completely soppy, machine-gunning laser warfare is more exciting than anything with bunny rabbits in it, and her column is a complete waste of space.

THE 1992 VOTE THAT REALLY MATTERS – HERE'S YOUR CHANCE TO HAVE YOUR SAY ON THE SUBJECT:

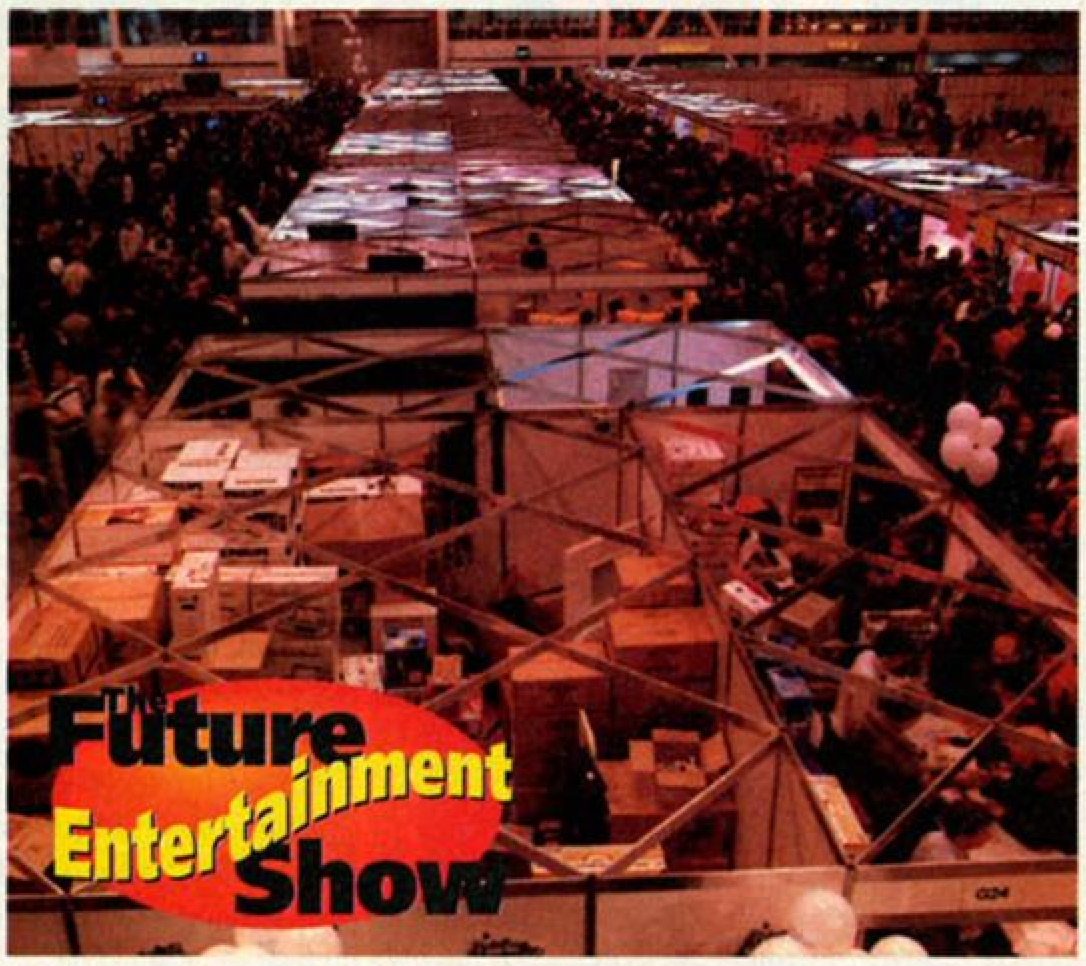
Jot down whether you agree or disagree with Maryanne's point of view, together with a sentence or two explaining why. Send it to: AA84 VOTE-IN, Amstrad Action, 30 Monmouth Street, Bath, Avon BA1 2BW, to arrive by September 31st. We'll tot up the votes, print some of the reasons and send two readers (selected at random from those that voted) a couple of budget games.

If a clear majority agree with Maryanne's view, we'll give her a page or two to list/review her favourite non-violent CPC games. If a clear majority disagree with her view, we'll put a stop to *Maryanne's Mail* and ban her from writing for the magazine ever again. There's a lot at stake, readers, and every vote counts. Cast yours today.

NEWS... NEWS... NEWS... NEWS... NEWS... NEWS... NEWS...

amscene

Calling all readers!



Make a huge note in your diaries for November 5th-8th, and draw a big circle round Earls Court on your map of London. Why? Because that's the time and the place for the biggest computer games show of the year – by miles.

It's called the Future Entertainment Show, and attendance over the four-day event now looks like being over 100,000, which makes this the biggest show for years. In fact, it's turning into such a giant event that it's overflowing! Originally, the show was going to take place in Earls Court 1, but the response has been so terrific that Future has had to book Earls Court 2 as well...

The show is a logical step for the company that now produces the market-leading magazine for just about every computer format (including *AA*) and sells nearly a million magazines a month!

• An extra attraction at the show will be the finals of the National Computer Games Championships, which has been organised by Future (with total prize money of £20,000!). And Yorkshire TV will be filming this and other events on the first day for its new computer games series this autumn (starting October 26th).

So don't forget – **Earls Court 1 & 2, 5th-8th November 1992** – be there or be square!

More modulators available

Widget-supplier WAVE has managed to track down some TV modulators for the CPC. Amstrad manufactured these devices during the machines' heyday, but has long since ceased production, making them very scarce indeed. There's one snag with the WAVE modulators, however. They're imported models which will only plug into TVs with SCART sockets. This effectively rules out all but the latest generation of domestic TV sets. WAVE is selling the MP-1F (464 version) for £29.95 and the MP-2F (6128 version) for £39.95. Postage and packing is £4.70. For more info, call WAVE on 0229 870000.

Firmware Guide update

Thomas Defoe, co-author of the Firmware Guide reviewed last ish, has got in touch to clear up some confusion over the price. We said the Guide cost £7.95, whereas the actual price for the Guide alone is £4.50. You can also get versions with accompanying program tapes or disks, however, and these cost £6.75 and £8.75 respectively. The programs include full assemblers, disassemblers, monitors, debuggers and another 100K of various utilities. Even better value than we thought!

To order a copy, or find out more, call Thomas Defoe on 0279 651487.

Seikosha's 24-pin bargain

Go green – recycle!



■ **Not deliberate: the *AA82 Type-Ins* farrago.**

Bury-based Olives Papers is producing computer listings paper made entirely from recycled materials. Two types are on offer: Laz-a-lyst (pardon?) is the high-quality version, while Concept listing paper is a bit more down-to-earth – apparently it's not de-inked, so it's a bit 'speckly'. If you want to do the decent thing, call Olives Papers on 061 705 1886.

• Recycled listings paper is one thing, recycled listings another. Many thanks to all the readers who spotted (spotted? – who could miss it?) the fact we reprinted the previous issue's *Type-Ins* section last month. That was an incredible stupid clanger that came about somewhere between us and the printers. And in response to all the calls – no, it was NOT deliberate. We have no trouble filling the pages in the mag – quite the reverse, there's not enough space to write about everything we want to.

• Oh yes, and thanks to the reader who spotted the similarity between *Stardodge* (*AA82*) and a rather 'similar' bit of code in an old issue of *ACU*. Grr...

Menzies speaks out!



Photo compo

We asked for pictures of famous people reading the magazine, and at last we've got one! Settle back, punters, and feast your eyes on the right reverend his holiness the Mayor of Crewe and Alscacer, here ringing up *AA* from his car phone to tell us how fab he thinks we all are. But wait a minute... gadzooks, it's not the Mayor at all, but a young scout by the name of Gavin Wright. Wrightie broke into the Mayor's car because he didn't have 10p for a phonebox. Nice try Gav, have a tenner – buy a phonecard. Remember folks, there's £25 up for grabs for any photos of real celebs (not scouts disguised as Cheshire council officials) reading the mag.

Recipe spot

CHOCOLATE SHERBET SAUSAGES

Cook some sausages and leave them to cool. Melt some chocolate in a bowl. Coat each sausage in chocolate. Roll the sausages on a table covered in sherbet. Eat them cold. (NB: You will be sick.)

Action Zone

Grapevine is dead, punters. But cry ye not. Half of it ('Meet the team' and the charts) has moved to page 43, and the rest has been incorporated with part of _Reaction_ – and loads of spanky new things – in this stonkingly hip new section we're calling _Action Zone_. Your host for this month's breathtaking bout of mass merriment: ADAM PETERS.

Talk Hard

It's the interview with a difference, where *you* get to ask the questions. See below for details of how to submit your questions...



ROD LAWTON
(Editor of AA)

Why do you include adverts for other computers (Amiga) and other computers' magazines (Sega Power, Total!) in Amstrad Action? *(John Davies, Fife)*

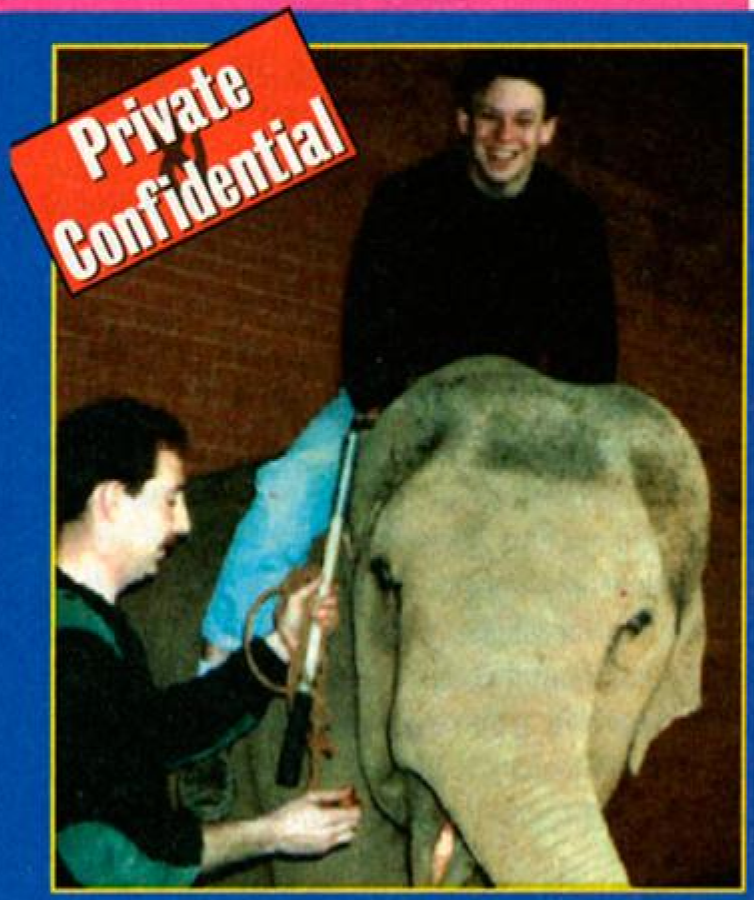
I'll answer that question by asking you one, John. Do you think that £2.50 is a lot to pay for a magazine? Well, you'll have to take our word for it that if we didn't carry advertisements it would be a darned sight more! *Amstrad Action*, in common with most newsstand magazines, relies on advertising to boost its income and cover a large part of its costs. As for the Amiga... well, we don't think any of our readers are going to rush out and buy one of these overpriced games machines anyway, so it's no skin off our nose. And if it helps to pay the bills...

We also carry ads for other Future Publishing magazines. That's 'cos we're one big, happy family and we like to help each other out. (More to the point, the publishers tell us to.)

Why do you always put really old games like Forbidden Planet or Dragontorc on the covertape? Why can't we have WWF Wrestling (full game) on the tape? *(Karen Solley, Hull)*

Well, Karen, we'd love to put a game like *WWF Wrestling* on the covertape – but we can't afford it! It works like this: when we put a game on the covertape, we have to pay the publishers quite a hefty wodge of cash. The size of this wodge depends on how much the publisher expects to lose in sales of that game as a result of it being on a covertape. In

Private & Confidential



◀ **Our topper chum Richard 'Rich' Eddy. (On the right. The one without a trunk.)**

Richard Eddy (CodeMasters Press Officer)

● **Full name (including embarrassing middle names)**
Richard John Tequila Iguana Eddy.

● **Printable nicknames (past and present)**
'Poodle', I'm told, my mother used to call me when I was toddling (for no reason other than to make me look stupid when answering questions like this).

● **Previous jobs**
Agony Aunt to my chums (usually v. late at night in pubs after some falling-down water), glamourous party host (most Fridays and Saturdays, my place, Shropshire), Luxury hotel manager (just knock on my door at some ungodly hour in the morning and burst into tears on my doorstep), and... Erm and I edited a couple of magazines when I had the time.

● **Favourite CodeMasters game**
Micro Machines on the Nintendo is, honestly, the best competitive game I've ever played. *Captain Dynamo* and *Steg* are both excellent fun.

● **Favourite other game**
Micro Machines is definitely number one regardless, but at a push *Pang* is incredibly compelling, *Spindizzy* hooked me for a long time too, and the sadly-obvious *Lemmings*.

● **Who should be prime minster, and why?**
Jim Bowen because he'd make sure everyone had their BFH (bus fare home).

the case of an old game, this might be in the region of a few hundred quid. We can afford that. However, Ocean might expect to earn several thousand still from *WWF*, especially when it releases it on budget... there's no way *Amstrad Action* can stump up that kind of cash for a covertape prog.

What is the best thing and the worst thing about working on Amstrad Action? *(David Trelawney, New Zealand)*

Hmm... that's a tricky one, David. The best thing about working on *Amstrad Action*, I suppose, is that in the course of a single month you start with just a set of ideas, some plans and a few new products and then work it all up into a complete magazine – it's quite a job, I can tell you! ...which brings me to the thing I least like. Deadlines. They always creep up on you towards the end of the month, and the last few days are always spent in a panic trying to get the magazine to the printers on time. That's not much fun at all.

Why don't you put more game reviews in Amstrad Action? You should review four or five full-price games every month. *(Ian Willis, Cardiff)*

Why stop at four or five, Ian? We'd like to put ten or twenty full-price game reviews in each issue! There's only one problem. No-one's publishing them any more. The major software houses (in the full-price market, at any rate) have all but dropped the Amstrad, with the result that the only new games coming out these days are from budget houses.

It's not that we don't want to review full-price games, it's just that no-one's producing them!

WANNA KNOW SOMETHING?

Here's your opportunity to put your own questions to any of these CPC folk: COLIN CAMPBELL (*AA*'s new publisher dude); JON CARTWRIGHT (Seymour/Dizzy programmer); RICHARD EDDY (CodeMasters PR); ROD LAWTON; KEN LOCKLEY (Ocean PR); ADAM PETERS; PETE RANSON (Big Red graphics dude); LAM TANG (our designer); ANDREW WATT (US Gold/Kixx PR). Send your questions to Talk Hard at the usual address (see page 2).

State of the Art

The work of two artists comes under scruitiny in our readers' art section with the ever-changing name. Send your pictures (on tape, disk or paper) to *State of the Art* at the usual address. You could win summat...



■ **Declan Sweeney of Castlebar, County Mayo, Ireland is a big fan of the movies. Here's his Michael J Fox piece...**



■ **Ten quid whinges ("Oh, this is such a long journey, all these motorways...") its way to Graham Briggs in kloudy Kent.**



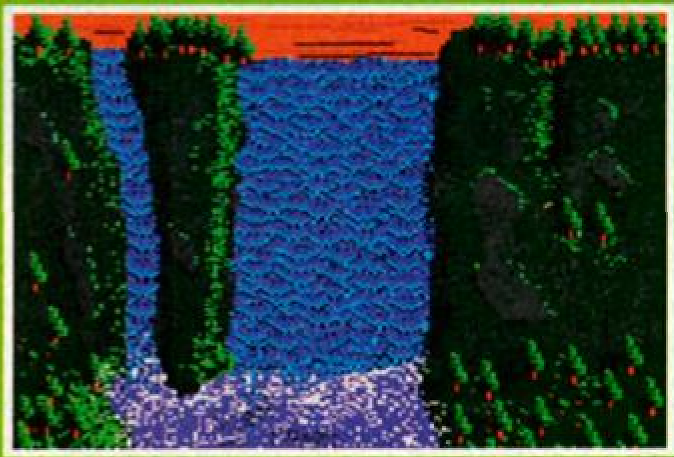
■ **And here's Declan's Michael Keaton and Jack 'I can only play one character, not very well' Nicholson impression.**



■ **Graham Briggs gets all science-fictional and misses out on the £10 prize by virtue of having already won it.**



■ **Briggsie again, here with a picture of a castle and a moon and a plane and... well you can see that for yourself really.**



■ **Absolutely incredible! It looks dead dull here, but see it on screen. The water actually moves! How did you do it, GB?**

● Who would you most like to throw a wet sponge at?
The person who thought *Parallel 9* was an adequate replacement for *Going Live*.

● Favourite thing about the CPC
It's versatility, simple as that really.

● Person you most fancy
It varies. I enjoy being a tart too much.

● When the aliens arrive, what will they look like?
Everyone knows aliens look like people wrapped in Tinfoil with sparkly deely boppers and make 'bleebity-bleep-bleep' noises.

● Your best party trick
To do anything (there's nothing I find too stupid).

● If you had a pet kangaroo, what would you call it?
I usually name pets something really odd (ie, Shoebox an ex-hamster, my cat Rock, a goldfish called Rhizobium (after a bacteria)) so it'll probably be given a name like Biriani (after my fave curry).

● Most embarrassing incident
I'm known to do a lot of very odd things but I'm pretty much without shame. But that's a bit boring so I'll make a confession, though: If anyone at my New Year's Eve party two years ago thought the 'special German' sausages-on-sticks tasted odd – I'm very sorry. They were regular porkies that fell into a bowl of dirty washing-up water as I wrestled them away from the cat – it was simply too late to make any more. Your upset stomachs had nothing to do with the year-old bottle of Pernod which I blamed. Sorry.

● Dizzy or Seymour – who's the best?
I find it difficult to pick between two characters I am deeply attached to. Financially.

● Favourite chocolate bar
Those foreign bars with names like Poo, Squitty, Full Fart and Kipper Pants as they appeal to my lavatorial sense of humour. Generally, I hate chocolate.

● Favourite pop group
Er, not one group but certain singles from Madonna, Kylie, Hazel Dean, Right Said Fred, Abba... generally anything dancey and happy, because that's the kinda guy I am.

Next month: *Cheat Mode* guru Phil Howard reveals all: haircuts, halibuts, hickory sticks and more...

Early release
CodeMasters

What has Britain's leading supporter of the CPC got up its sleeve for the coming months? The *AA* Previews Squad broke into the CodeMasters offices late one night and ran off with a copy of their release schedule for the rest of the year. Here's the full details of what to expect from the Leamington crew in the coming months (but don't tell them we told you)...

AUGUST

CAPTAIN DYNAMO (£3.99)
Vertically scrolling lunar hi-jinks ahoy! We reviewed *Captain Dynamo* last month and gave it 68%, which means we think it's pretty neat (we're dead mean markers, you see).

GRELL & FALLA (£3.99)
Another game reviewed last month, *Grell & Falla* is a distinctly average and somewhat convoluted shoot-em-up sort of thing, starring a goblin, a fairy and an enchanted garden.



SLICKS (£3.99)
Slicks is a car racing game, based on CodeMasters' smash hit American Nintendo NES game *Micro Machines*. It's similar to that *Super Sprint/Supercars* game style, with an overhead view of the cars of the track. The idea is for it to be more a tug-of-war type race, rather than first-past-the-post. Players will score points whenever they draw more the certain distance in front of their opponent. There will be both one and two player modes.

SEPTEMBER



STEG THE SLUG (£3.99)
No-one's really sure when this is coming out. The 16-bit versions appeared last month, but the 8-bit programmer seems involved in other things at the moment. It looks like it's going to be a corker, based around the innovative idea of 'bubbling' worms and guiding them along passageways towards your baby slugs (!).

WILD WEST SEYMOUR (£3.99)
You ought to know plenty about what this game's going to be like, seeing as how it's the focus of our game development series (which returns next month). It's Seymour's second arcade adventure, it's based on a journey across America, it's broken up into small sections (about a dozen screens each) and it's due to be released on September 22nd. So start saving those pennies now, Seymourheads.



SPELLBOUND DIZZY (£3.99)
The biggest Dizzy adventure ever (a bit too big, if you ask us) leaps from the chart-topping *Dizzy's Excellent Adventures* package on to the stand-alone budgie shelves.

OCTOBER

ROBIN HOOD GAME (£3.99)
Based on the Nintendo game *Super Robin Hood* (no relation to the Oliver Twins' 1987 game of the same name), Codies haven't decided on a name for this one yet.

CARTOON CRACKERS (£9.99) *COMPILATION*
The first of this Christmas' five-game packs. *Cartoon Crackers* features three re-releases and two newies:

CJ in Space – the first CJ game to appear on the CPC. CJ's an elephant, who mainly deals in platform games in the Rick Dangerous mould (complete with dead slow two-player mode).

Captain Dynamo – vertically-scrolling collect-em-up, reviewed last month and released as a stand-alone any day now.

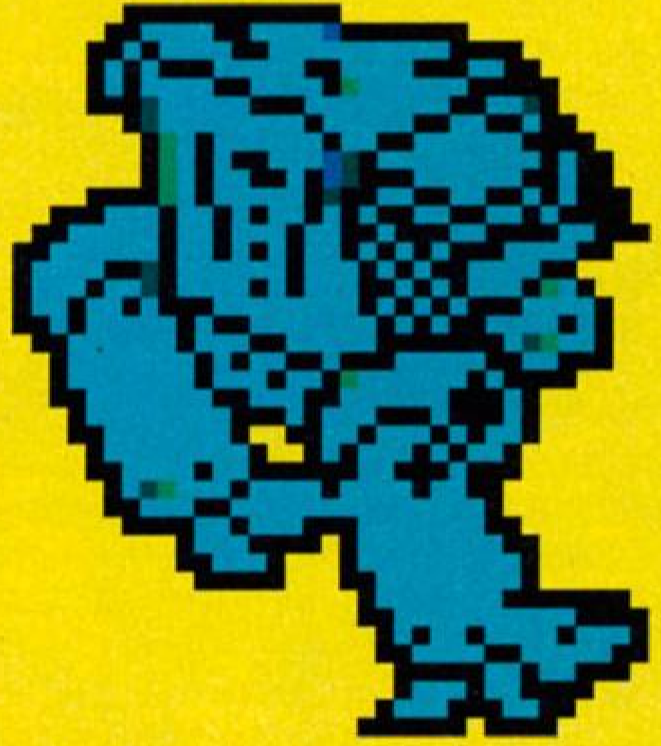
Magic Land Dizzy – one of the most popular Dizzy adventures, *Dizzy 4* first appeared on the *Dizzy Collection*, before hitting the top spot as a stand-alone.

Turbo the Tortoise – a brilliant horizontal platformer, originally released by Hi-Tec (it scored 92% last month). It seems the Codies have beaten Zeppelin in the fight for the rights to the game.

DJ Puff – DJ joins CJ as the pack's only new games. It's a platform game starring the grown up hero of golden oldie *Little Puff*.



Sprite of the month



THE DREADNOUGHT
There's a lot of sprites around computerland that bear a striking resemblance to the ED209 droid from *Robocop*. Apart from the hero of the first level of the plodding *Robozone*, there's this little babe from *Space Crusade*. In overhead mode she looks like an overweight Metal Mickey with lettuce stuffed in her ears. In 3D mode she looks like this, all big and menacing with gunfire blazing from both shoulders and the top of her head. She's as hard as she is hard to kill. If haven't got at least four well-tooled-up warriors at your disposal, run for cover. Away from the action of the game zone, the Dreadnought (or Dreadie as she's known to her mates) likes gardening and classical music

NOVEMBER

SUPER SPORTS CHALLENGE (£9.99) *COMPILATION*

The Codies crowd aren't 100% sure that they're going to release this on the CPC. If they do, it'll feature these five games (three of them new ones):

1st Division Manager – average soccer management game, with a neat graphic main menu. Scored 54% last month and is currently flying high in the charts.

International Speedway – a brand new motorcycling game, and that's all the details we've got at the moment...

Slicks – Car racing game released as a stand-alone in August (to be reviewed real soon).

Cue Boy – pool and snooker sim that Codies reckon is going to be a scorcher.

Wrestling Superstars – this one's "looking really good on the C64" at the moment. It's the Leamington dudes' answer to WWF/WCW mania.



PRINCE OF THE YOLK FOLK (£3.99)

The best Dizzy game of all time, *Prince of the Yolk Folk* is a mere 30 screens big. It featured on the *Dizzy's Excellent Adventures* compilation last Christmas, and is finally appearing on the £3.99 shelves. Hurrah!

DIZZY & THE LOST TREASURE OF THE YOLK FOLK (£9.99)

The big Dizzy Christmas release isn't a compilation like in past years, but a single game coming in an interactive pack with all sorts of goodies and gifts. It looks like the game is going to be set in Indiana Jones style territory.

SEYMOUR SUPERSTAR (£9.99) *COMPILATION*

Excellent. A Seymour compilation to beg Santa for, *Seymour Superstar* (three oldies and two newies):

Seymour goes to Hollywood – a veteran of the *Cartoon Collection* and recent stand-alone release. *AA*'s favourite arcade adventure of all time.

Super Seymour – dodgy *Bombjack* rip off.

Wild West Seymour – Seymour's new arcade adventure, released on its own in late September.

Seymour Stuntman – a platform game that's set in the Wild West and looks similar to *DJ Puff*.

Seymour Cybercop – an arcade game with "name subject to change". (I should think so!)

DECEMBER

POGIE – THE GAME (£3.99)

Very little info on this, other than that pogies are those cute fluffy creatures in Dizzy games.

Street talk

We sent our roving cameraperson (er, Adam) to the Virgin Megastore (in Oxford Street, London) to ask some CPC owners what they think of the current reduced availability of Amstrad games. Next month we present some possible solutions to the problem...



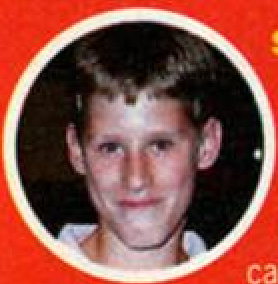
Steve Bennett (23) Ealing, London

"This is just about the only place I know to get CPC software. More and more people are having to get it through mail order companies. It's not too bad in London – there are a few places you can get it – but in smaller towns you're stuck."



David Springfield (11) Bethnal Green, London

"I think it's really bad that a lot of good games are only coming out on consoles. Something like *Sonic the Hedgehog* would be really good on the Amstrad."



Shane Rhodes (12) Bethnal Green, London

"If there's a game you like on a different computer, what can you do? You'd have to buy the other computer to get the game and that's a waste of money."



John Geelan (13) Melrose, Scotland

"It's getting really bad. We went to the other Virgin Games store and there weren't any CPC games there at all. Back home, the only place that sells them is John Menzies, and they only do budget games."



Philip Bryant (12) Faversham, Kent

"WH Smith used to sell Amstrad games, but they don't any more. There's nowhere at all in Faversham where you can get them."



E HONDA



ZANGIEF



BLANKA

The word

Well, no sooner had we slagged off the PC games market than we find ourselves involved in a bitter feud with 'sister' mag *PC Format*. The Formies have nicked the extra space we were promised in the office re-organisation and boxed us in with a succession of fire hazards.

Along with our chums from *Your Sinclair* (who we share a small room with) we have been fighting back in the only way we know how – by calling them names behind their backs (immature we know, but they're bigger than us). Feel free to glare threateningly at any copies of *PCF* in your local newsie, in sympathy with our struggle.

Bad news time, folks: popular sofie Palace Software has bitten the bullet, having been taken down by the collapse of Palace Video (various financial doobries meant that the solvent softie was liable for the video company's debts).

Good news time, folks: A new company, Titus UK, has been set up, taking over all the Palace projects/staff/offices. No word yet on possible Palace/Titus releases such as *Crazy Cars 3* and *Super Barbarian*.

Big apols to John Menzies. A couple of months ago Rod said they didn't do electronically-duplicated budget software any more. In fact they do (the machine in Bath Menzies was broken when Rod went to check!). Unlike our French compadres, they only do CPC stuff on tapethough (not disk).

Aha, a memo here from our big boss man Greg: "Remember to mention the Future Entertainment Show or I will pickle your head." Er, November 5th to 8th at Earl's Court, see ad on page 18. (Future Publishing, the personages behind *Amstrad Action*, are currently involved in a 'my dad is bigger than your dad' style competition with arch-rivals EMAP to see who can put on the gnarliest show.) More *Action Zone*-ing in four weeks time...

...and finally

What are those piccies on the left about? *AA* can exclusively reveal that US Gold are releasing a CPC version of beat-em-up *Streetfighter II* ("the world's most popular coin-op") in time for Christmas. 'Rah!

BACK ISSUES



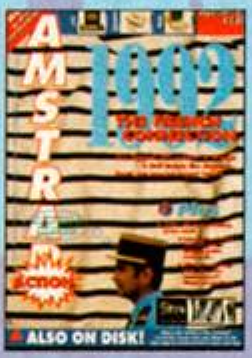
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technical forum

Oh dear, it's a sad moment for *Amstrad Action*. ADAM WARING, its long-standing Consultant Technical Editor is off to pastures new. Well, deserts, probably. The fact is that Adam is off around the world – we presume 'to find himself'. We're expecting a postcard from Hull any day now...

In the meantime, *Technical Forum* is being taken over by Richard Fairhurst, who seems to know more about the CPC than all of us put together. (Oh, that's not very much, is it?) Richard is 92 and lives in a shed in Cleethorpes.

So there you are. Write to: Technical Forum, Amstrad Action, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW

POWERPAGE PROBS

Tons of readers have written in with questions about *PowerPage*, the DTP program on the *AA82* covertape. As many of the questions are similar, it seemed a sensible idea to deal with them all at once.

When printing out on *PowerPage* and *Pagemaker Plus* from the *AA* covertapes, the page is only printed over two thirds of the paper (approximately).

D B Limming
Peterborough

That's intentional: in fact, the page is only printed over half the page if you're using A4 paper. Both *PowerPage* and *Pagemaker Plus* are designed for A5 print-outs (half the size of an *AA* page). However, if you really need an A4 print-out, find a photocopier (try your library) which will enlarge the A5 print-out.

I am a desperate *PowerPage* addict. The program is superb, powerful and could be very useful if I could print out my masterpieces, but double line spacings are running riot...

I'm using an Amstrad DMP 3160 and CPC 464. What do I do: Plan A, take your advice, or Plan B, shoot a poor defenceless 3-inch disk?

Please help me (I can't afford an Uzi 9mm).

Rob Last
Essex

***Technical Forum* receives more questions about this problem than any other. The problem lies in a mistake in the CPC's design, where one pin (14) is connected to the wrong voltage. This causes most printers to print an extra line-feed after every line. However, there are two solutions.**

The first is to buy a cable with pin 14 disconnected, or to have your existing cable modified by your friendly local electronics shop. The second, and cheaper, alternative is to stick a piece of sellotape over pin 14, which (looking from behind) is, on the top edge, the fourth from the left on the CPC's printer port connector. It doesn't matter if you blot out pins 15 to 17 (to the left of 14), either, so you don't need such a thin piece of tape!

Is there a problem with the *PowerPage* program? When transferring from tape to disk I get the message that the disk is full, but the rest of the program won't load onto the B-side of the disk. Can you help?

E Marsh
Worksop

***PowerPage* and all its associated files take up a whole 178k. The reason why it's not all fitting on one side of your disk is because you haven't formatted to Data format (as stated in the Unpack program), but instead to the CP/M System/Vendor format, which as it only gives you 169k, will cause the disc to fill up prematurely. Reformat the disk as Data, try again, and all should be well.**

When I complete importing an ASCII file into *PowerPage* I cannot get out of that mode. At the end of filling a page I am asked to reposition the margin. Naturally I have no wish to do so but I am continually prompted and I cannot get out of the program.

Brian Halls
West Sussex

***PowerPage* won't stop importing an ASCII file until it's all been loaded in. If your ASCII file is too long for one page, the best advice is to split it up into more manageable chunks and load each one individually. Alternatively, to fit it all on the page, you could try using a smaller font and spacing.**

When I type RUN"OPTIONS, my computer (an Amstrad 6128) comes up with "Improper argument in 10030". Have you come across this fault and how can I correct it, or do I have to send it back to do it?

A.M. Davies
West Suffolk

Erm, I think you're a wee bit misguided in trying to RUN 'OPTIONS'. OPTIONS is a *PowerPage* program module that it loads in when it needs to (that is, when you select 'Options' from the menu-bar). You have no need to RUN it yourself: all *PowerPage* programs can be loaded from the menu system.

REAL QUESTIONS

1. Can I incorporate the BASIC programs from the Amstrad manual into my own programs to put into the Public Domain? If not, why?
2. Is Print-Out's *Firmware Guide* as good as the original Firmware Manual (Soft 198)?
3. Is it possible to hook up a 3.5-inch drive as a first drive with the necessary ROM chips in a ROM box and the interface?
4. Is it possible to transfer programs from the CPC to an Archimedes A3000 using *PC Emulator*?
5. Did you know that Spectrum and C64 emulators have been written for the Archimedes, and that there are Amiga and ST emulators in production? Do you know if a CPC emulator is being produced?

Jonathan Nutt
Reading

1. No, because the copyright belongs to Amstrad. If you'd written a copyright program, you'd feel pretty peeved if someone went around ripping off your code for their own programs.
2. Depends what you want to know. If you want to know about the firmware CALLs, it's just as good: if you want to know the unofficial details about BASIC →

TECHNICAL FORUM

top tips

Send your cleverest ideas to: Top Tips, Amstrad Action, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW

CHEAP MODULATORS

A number of people have expressed an interest in obtaining an MP3 Modulator for the CPC. You might be interested to know that Greenweld Electronics (0703 236363) is selling the MP3 modulator for £14.95 plus £3 P&P.

The model it has was designed for the European market, and to get the audio output from it two components need to be changed (the replacements and instructions are supplied).

The replacement can be quite fiddly, so it may be advisable to trick/bribe/force an electronics teacher, or some like-minded friend. (A pint of beer often helps electronic teachers' concentration.)

Jon Aldridge
Purley

AA: Thanks Jon – that's a boon for readers seeking a modulator. A quick look through the Greenweld catalogue reveals that the company also sells GX4000s for a very reasonable £29.95 – not the cheapest, but a reliable supply.

HARD (SPRITE) DRIVIN'

When using the sprite designer (*AA81* covertape) I found that after I'd designed a sprite set I had to reload "ESD.BAS" every time I wanted to use the sprites. So, because this program only sets up the new RSXs, it gave me an idea: I ran "ESD.BAS", waited until I was given the choice to load the designer or the demo, and pressed ESC (twice).

The machine code for the RSXs in now in memory. Now type:

```
SAVE "ESD",b,&9C40,&110
```

Every time you want to use the sprites in your programs, type:

```
LOAD "ESD.BIN": CALL 40000
```

at the start of your program, followed by the load sequence for your sprites. "ESD.BIN" is 1k long, whereas the program is 4k long!

Daniel Bettesworth
Gloucestershire

AA: Thanks, Daniel. It's nice to know people are getting stuck into the programs on the *AA* covertapes!

→

variables and CALLs it's much better. However, as far as details on the various chips in the CPC goes, it really isn't much cop I'm afraid.

3. I don't see where the ROM box comes into it. The requisite AMSDOS ROM is already contained in the DDI-1 interface (needed for any first drive), so you don't need a ROM box. In general, though, it is possible: Siren Software's first drive package does exactly this. Be warned, though, that ROMDOS won't give you extra capacity on a 3.5-inch first drive, but only on a B-drive.

4. By writing to a PC disk with a program such as *2-in-1*, this should be no problem.

5. Yes, I did know that! A CPC emulator isn't being produced, partly because of the smaller CPC user base, partly because fewer CPC users have felt the need to 'up'-grade (being equipped with an excellent computer already), and partly because the Archimedes wouldn't be able to handle everything you threw at it – Logon System's *The Demo*, for example.

HELLO HELLO HELLO

I own an Amstrad CPC 6128 and I was wondering if it is possible to link my Amstrad to a PC, without using an additional disk drive. What sort of software would I need, and how much will it cost?

M Ball
Avon

If you don't want to fork out for a 3.5-inch drive (which is an excellent buy anyway), you can copy files across using a serial port link. This involves buying a serial interface for your CPC (try Siren Software), and linking it to the serial port on your PC using what's known as a "null-modem cable" (available at most computer shops). You'll also need a suitable piece of software at each end, but you should obtain some with the serial interface, and PC software is cheaply available as PD or shareware.

In all, though, it's probably just as good value to go for the 3.5-inch drive for your CPC, especially since you can save money in the long run by not buying expensive 3-inch disks.

C FOR YOURSELF

I have written a couple of simple games in BASIC for my son (who is 2 and therefore not too fussy!). However, I'd like to speed things up a bit, yet am loath to delve into machine code. As I'm a programmer by trade I'm very familiar with other languages such as C and Ada, so I thought of buying a CPC compiler for my 6128. But...

1. Can I access ALL the graphics and sound facilities from other languages?

2. What sort of speed improvements are there over BASIC – how does this compare (roughly!) to a machine-coded game?

3. Can other people without the C environment run my games (after compilation)?

4. Are the other languages, such as C, true, standard, compilable, library-orientated languages, such as can be got for PCs?

5. Finally, can you recommend a fast, reliable language for my 6128?

John Penny
Preston

1. No. In fact, since most other languages on the CPC are run from CP/M, you probably won't be able to use any graphics or sound from this text-based system.

2. You should find that your programs run a few times as fast as under BASIC. However, they won't be a patch on a machine code game.

3. Almost certainly, although it depends on the compiler. After all, that's one of the purposes of compilation!

4. You can't seriously expect as good an implementation on the CPC as you would on a £1,000 PC. In fact, many CPC implementations come under the heading of 'Small C'. However, you shouldn't find adapting a problem.

5. Arnor does an excellent version of C, with (it says here) I/O and maths libraries, a good editor and an optimising compiler (Arnor can be contacted on 0733 239011). Alternatively, for a cheaper (although less powerful) Small C system, you could try PD libraries such as Robot PD and WACCI. All these systems are CP/M only and require CP/M Plus, as supplied with the 6128.

VIDEO VIEW

I wish to create titles on my Amstrad 6128 and transfer them to a video tape to make a film: is there a software package to do this?

R Penten
North Humberside

Jess Harpur and Peter Campbell run a company called CampurSoft. And Campursoft is currently working on a package to do exactly that. Drop them a line at: 16 Slatefield Street, Gallowgate, Glasgow G31 1UA (with SAE, of course) to find out how they're doing.

SYSTEM UPGRADE

I recently bought a CPC 464, and I intend to buy a dk'Tronics 64k RAM expansion, a 40025 upgrade ROM and a DDI-1 disk drive.

Will all these accessories make my 464 into a complete 6128 machine?

Marc Downs
Oldham

With the exception of the Letraset to write '6128' on the keyboard, almost completely. There is one slight difference in the memory configuration, but I've never heard of this causing any problems, so you should be able to run all 6128 software and use the extra commands.

SLIPPED DISCS?

I would like to buy a 3.5-inch disk drive for my 6128, and I have also seen a program advertised called Soft-Lok which will transfer my tape games on to disk.

The question is: can I run the transferred games off 3.5-inch disk, and if so, how?

Alice Daniels
London

Yes, it is possible. The best way to do it is to format your disks to a standard 178k format, and use a cunning piece of equipment called an 'ABBA switch' (available from GVL Microform, 0772 701248) to play the Swedish foursome's greatest hits. No, er, to switch in the 3.5-inch drive as your A-drive, which means that anything you can do on the 3-inch drive you can (with the switch in the correct position) do on the 3.5-inch drive too.

You might find it easier to get a drive with a side switch on, because that will allow you to store twice as many games per disk. Again, GVL can help you here.



Ask Alex...

So Adam's written his last ever *Technical Forum*? I went to his leaving party and wished him all the best for the future – he's off round the world, apparently. Lucky devil! In the meantime, a big welcome to Richard Fairhurst, who's taken over from Adam as *AA's* technical expert.

Richard will be handling all your heavyweight technical queries while I, as ever, will be here to answer all your beginners' questions. Write to: *Ask Alex, Amstrad Action, Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2BW*

MACHINE CODE MYSTERY

John Dowell (who didn't say where he lives!) is foxed by machine code.

Q "I decided to type in the joystick testing program using machine code from *AA82*. But every time I tried typing it in, an error message like 'Syntax error' was printed on the screen. Why was this?"

A This problem is that's like talking Eskimo to a Malaysian! Machine code is a completely different language from BASIC, and when you type a program into your computer, you're actually typing it into the BASIC language hidden away on a chip in your CPC. (This is why 'BASIC 1.1' or 'BASIC 1.0' appears just above the 'Ready' prompt every time you switch on). Trying to speak machine code to this, which only understands BASIC, will lead to confusion!

What you need is an assembler, which is a program that does understand machine code. We printed *Devpac* on our covertape a while ago, or alternatively you could go for the highly professional *Maxam* assembler (look through the adverts to find where to get it). With an assembler, you can type in a machine code program without any trouble and it should work.

However, don't try to jump into the deep end too early! Machine code is a tricky subject (I know – I can't program in it!) and you're best off leaving it until you understand BASIC fully. After that you'll feel ready to tackle anything!

PLUS MINUS TAPE

Amstrad's strange decision to miss out the cassette port on the 6128 Plus is causing Mr J E Hickingbottom from sunny Scunny some problems.

Q "I have just bought a 6128 Plus and I wish to fit a tape deck to it as the disk game situation is zero in this town. Is it possible for you to give me the know-how or must I have it done for me?"

A I'd love to be able to help you, Mr Hickingbottom, but unfortunately I'm not an electronics genius and wouldn't feel safe giving out information on opening up your CPC and soldering in wires. Although there's no reason why you can't do it yourself, without electrical skills I'd strongly suggest you get it done professionally. After all, you don't want to accidentally make a mess of something inside the computer and face a huge repair bill.

One team of people who can do the conversion for you are R&C Systems Design. Give head honcho Chris Woods a call on 081 552 8900 for details of what's what.

One of *AA's* advertisers, WAVE, also does this conversion. Call 0229 870000 for more information.

WHEN I'M 664

Don Curtis of Paddington has bought Amstrad's rarest CPC and is confused by what it can do.

Q "I have just recently bought a second hand CPC 664 and, on buying your *AA* magazine, I find there is nothing written on this machine, only on the 464 and 6128. I also find it difficult, even at the library, to get any book on the 664."

A I have to admit, I didn't know much about the 664 either, as only a few were made! So I 'phoned up *AA's* new technical bod, Richard Fairhurst (who has a 664 himself, as it turns out), and got the full SP on what the 664 can do.

The reason that most books and magazines (including *AA*) don't mention the 664 is that there aren't many about. Amstrad dropped it in favour of the 6128 only a few months into its production run, and it wasn't selling that well anyway. However, you'll be pleased to know that it isn't much of an "odd one out". The 664 is identical to the popular CPC 6128, except that it has only 64k instead of 128k. It's also similar to a CPC 464 with disk drive, but has the few extra commands that the 6128 also has.

If a book or magazine refers to "the CPC 464 and 6128", it will be talking about the great majority of the features that the two machines share. The 664 also has these, so you can read these confidently knowing that they apply to your computer too.

LOADS OF TROUBLE

A few of you have written explaining that you're having trouble with disk versions of the *AA* covertapes. Derek Pilbean of Ipswich sums it up.

Q I have an Amstrad 6128 and last month I ordered the disk version of the *AA* covertape for the first time. Only now I can't get anything to load off it! I've tried CTRL+ENTER ("Bad Command"), RUN "DISK" ("Not Found") and even |CPM. Is Ablex sending out blank disks?

A On the tape, files are accessed and loaded "sequentially". Pressing CTRL+ENTER loads the first file on the tape, which is the menu. But disks have no 'first' files (being circular!). You should type RUN"MENU" instead. (Typing CAT gives you a list of files on the disk.)

top tips

EXTRA KEYPRESSES

Although most people know about CTRL and cursor keys (to move to the start or end of the line), not everyone knows about the BASIC keypress CTRL and TAB. This is used to switch between insert (normal) and overwrite (i.e. what you type deletes what's underneath it) when editing BASIC lines. In addition, at the start of a line, it acts as a sort of ESC key in AUTO mode or in an INPUT statement. This can be useful if a program disables the ESC key.

Matthew Dewhirst
Slough

AA: The effect of the key is different on the various models of CPCs. 464 owners will find it works as above, but on 6128s and Plus machines the ESC key is virtually ineffective for INPUT statements. The 664 is a different kettle of fish: it always aborts the current line without printing anything on the screen. Strangely, the 664 ROM has provision for an insert/overwrite toggle, but it can't be accessed without a POKE (e.g. with a Multiface).

PCW PALS

The Amstrad CPC is very similar to the same company's PCW range. They both use 3-inch disks, too, of course.

But did you know you could swap files (e.g. text documents) between the two machines? At first sight it looks like you can't, because the PCW uses 175K format disks, while the CPC uses 169K or 178K formats.

HOWEVER, the PCW is perfectly happy *reading* 178K CPC disks. As long as you format your disks on a CPC, you can swap files willy-nilly!

Rod Lawton
Weston-super-Mare

AA: Hang on, that name's a bit familiar... you're not admitting to having once owned a PCW, are you Rod?

Wot, no HELP?

Nope, 'fraid not. We've obviously got so good at answering your technical queries that you're not bothering to use the HELP column any more!

We decided to scrap it because we were only getting about two or three entries per month – not really enough to keep it going! Of course, if we get enough complaints we'll re-instate it...

Painting w

How long is it since we printed a hardware project in *Amstrad Action*? To be honest, we're not great fans of the things since most are costly, time-consuming and prone to error – which the magazine gets blamed for! However, this project, from A C Foster of Birmingham was just too good to turn down... but that's enough from us. Let the man speak for himself!

A lightpen is a useful add-on for the CPC – it's often faster and more convenient than keyboard control. Its uses for data entry selection, screen menus, drawing packages and educational applications are widespread.

But the cost of a commercially-produced lightpen and associated software can be off-putting, ranging from around £20.00 upwards, and can usually only be used within its own particular package.

I bought a lightpen for my 6128, and as I am interested in electronics, I took it apart to see how it was made. As a result of this investigation, I was able to build one myself for a fraction of the cost of the original. A little time, a few components, and a short example program were the result, all for a total cost of £3.74p! (*Unless some of the little widgety bits have gone up in the meantime – ed.*)

The original lightpen that I made has been very reliable, and is still going strong after two years' operation, having given me no trouble at all.

Don't let any foreign bodies get into the end of the lightpen, though, like dust or fluff, as this will impair its operation. You may also have trouble getting it to work with a greenscreen monitor or one with poor brightness.

Always point it directly over the cursor as you would an ordinary pen, and don't use any pressure on the screen – just a very light touch is needed.

Construction details

The tools required for this project are as follows:

- A soldering iron and solder
- Wire cutters / strippers
- A small, flat-bladed screwdriver

Start by stripping off about 15mm of the insulation off both ends of the screened wire using wire strippers or a knife. Then unwind the outer screen wire from around the insulated inner wire and twist it to tighten up the loose strands. Strip off about 5mm of the inner wire's insulation, and twist it as before. (see Fig.3a)

Next you have to 'tin' the ends of the wire with solder. This is done by laying the wire on your work surface, putting the tip of the iron on the end of the wire for a few seconds (to heat it up) and then applying the solder to the wire and letting it flow over the strands. (see Fig.3b)

Next you solder the wire to the joystick socket. With the rear of the joystick socket facing you, solder the outer screen wire to pin 8 (common) and then solder the inner wire to pin 2 (down) (see Fig.4). Fit the cable clamp onto the wire (this prevents the wire being pulled out of the socket) and fix it together with the two screws provided. Then fit the cover and screw it together.

After cleaning out the insides of your pen case, make a hole in the end cap large enough for the wire to pass through, and feed the wire through it.

The phototransistor comes next. Refer to Fig.1a and locate the pin corresponding to 'b' – the base pin. When you are sure that you have the right pin, take your wire cutters and cut off this pin as close to the body of the phototransistor as possible. Next you solder the phototransistor to the wire. Take care when soldering this device, as too much heat may 'Zap' the chip. Refer back to Fig.1a and locate the pin marked 'e' – the emitter (the pin closest to the metal tag) – and solder the other end of the outer screened wire to this pin. Then solder the other wire to the 'c' pin – the collector.

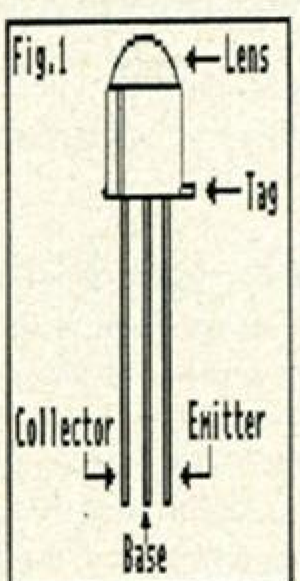
Check all your soldered joints and connections and make sure you have no short circuits between the resistor and the phototransistor's legs or the pins on the joystick socket. Put a small piece of insulating tape around the soldered joints to avoid them touching together.

Finally, push the phototransistor end of the wire as far down the pen case as you can so it's about 5mm from the end. You may have to trim the tip of the pen case to allow enough light to get in. Fit the end cap on to the pen case, and your lightpen is ready to plug in and use.

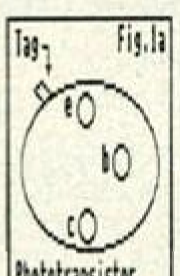
The way this lightpen works is very straightforward and easy to understand.

The lightpen plugs into the joystick port on the computer, and is similiar in operation to a joystick switch:

JOYSTICK OPERATION: When you first switch on your computer with a joystick con-



Phototransistor



Phototransistor Pin out (base view)

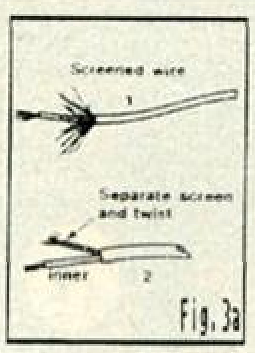
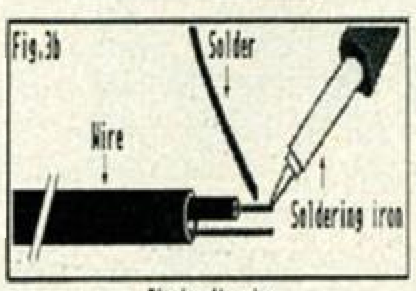
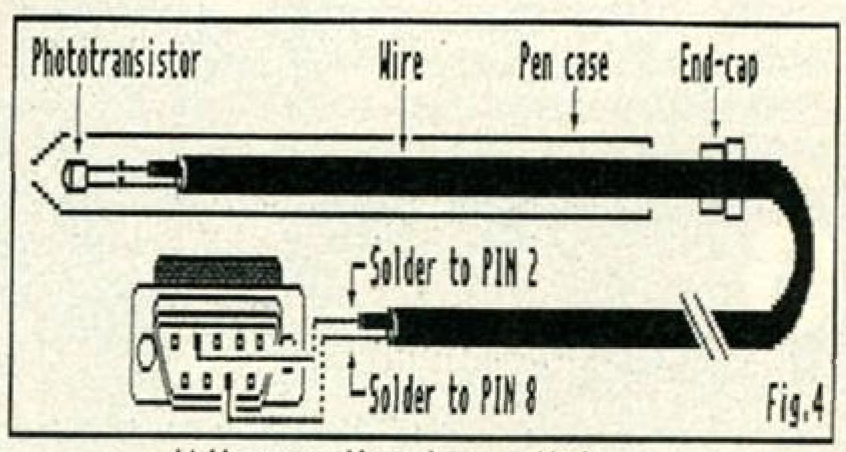




Fig.2 Joystick socket (rear view)



Tinning the wire



Lightpen connections (cross-section)

ith light...

Remember, the pen is triggered by light, not touch.

Above all, just experiment and have fun! The listing provided is only an example, and by seeing the way it works you should be able to produce programs of your own without much trouble.

CALLING ALL WIREHEADS!

We might be persuaded to do more hardware projects, but we haven't decided yet. What might *make* us decide is some neat ideas from you lot out there. There are one or two things we insist on, though:

1. Your project mustn't cost more than a tenner

2. There must be no risk of damaging something else

3. It has to be easy to make

OK? Well then send those ideas in!

nected, and move the stick, you will see arrows appear on the screen : UP – DOWN – LEFT and RIGHT. This is because moving the joystick operates switches inside the base which, when connected to the computer, complete an electrical circuit.

LIGHTPEN OPERATION: To enable the lightpen to complete an electrical circuit, it uses a device called a PHOTOTRANSISTOR as a light-activated switch. (see Fig.1)

The phototransistor in the end of the pen has to be pointed at a light source in order to make the 'switch' activate. When you have built this device, try pointing it towards a window or at a room light. If a string of DOWN arrows appear on the screen, your lightpen is working correctly. If NO arrows appear, check your wiring and connections. Downward pointing arrows are printed on the screen because the connection made to the joystick socket is to PIN No. 2 – the DOWN connection. (see Fig.2)

COMPONENT LIST

ORDER CODE	DESCRIPTION	PRICE
QY82D	PHOTOTRANSISTOR	1.98
RK61R	9 WAY 'D' SOCKET	60p
RK62S	9 WAY 'D' COVER	98p
XR12N	SCREENED WIRE 1M	18p
	OLD PEN CASE	
	TOTAL COST	£3.74
SUPPLIER - MAPLIN ELECTRONICS		

Program details

Not only do get a lightpen, you also get an art package to use it with! It's a rather spanky little icon-driven effort specially designed for your new gadget...

The "LITEPROG.BAS" program described here and supplied on the covertape is a simple little drawing package which uses a row of icons alongside the screen to control the direction the cursor moves in. You can even save your artistic creations to disk! Here is how the program works:

When the program is run, line 20 pokes the machine code at lines 680 – 730 into memory at location 39996 to 40074. This subroutine is controlled by the following variables :

CD – This controls the direction of the cursors on the screen.

CS – This controls the cursor spacing.

CX – This is the cursor X co-ordinate on the screen (horizontal).

CY – This is the cursor Y co-ordinate on the screen (vertical).

NC – This variable denotes the number of cursors printed, and is also used to return the cursor number pointed at during selection.

Lines 40 – 60 re-define characters 244-247 to produce diagonal arrows on the menu screen. Line 760 is the data for line 110. Lines 90 – 120 draw the menu screen. Line 130 sets the draw start point on the screen and variable 'p' sets the ink colour. Lines 160 – 280 select the drawing direction by calling the machine code routine and detecting which cursor was pointed at, and then 'gosub'ing to the drawing routine.

Lines 310 – 320 are the clear option. 340 – 350 is the picture load option. 370 – 380 is the picture save option. 400 – 410 is the quit option. 440 – 650 is the routine that controls the menu selection.

The CALL 39996 in lines 310,340,370 and 400 is to flush the keyboard buffer. This is needed because, when selecting various options with the lightpen, this puts the downward pointing arrows into the keyboard buffer, which will be printed on the screen when an INPUT statement is executed when loading or saving, but with a CALL 39996, these characters are dumped, and the only characters that will be printed after an input statement will be those entered after an input has been executed.

The program controls the screen output as follows: Look at line 160:

```
CD=0:CS=2:CX=39:CY=2:NC=12:GOSUB 430
```

CD=0 (print cursors down the screen) CS=2 (with a space between each cursor) CX=39 : CY=2 (starting at location 39,2) NC=12 (and print 12 of them) GOSUB 430 (goto subroutine).

The tip of the lightpen is touched on the monitor, directly over the screen image (which in this program is chr$ 233 – a block) then the control routine in the program flashes these blocks in sequence. Then the program measures the delay between flashing block number 1 and the moment the phototransistor switches when the block that you are pointing at is flashed – for instance:

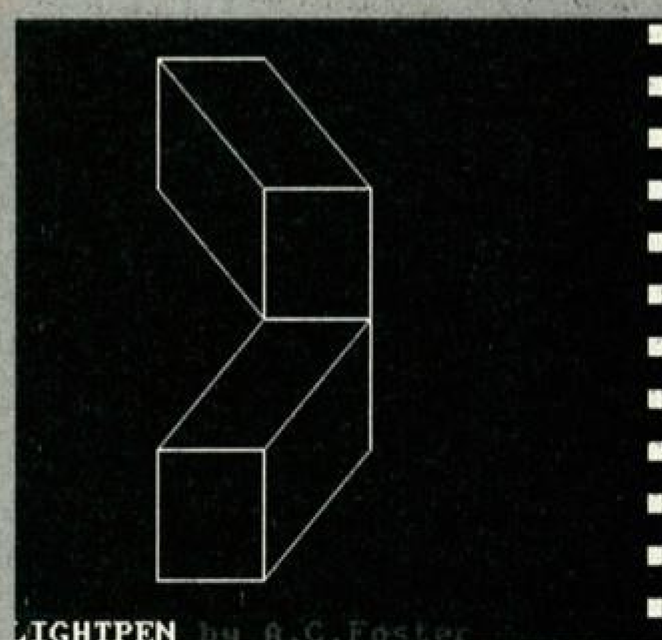
If you are pointing at block number 1, the delay in the phototransistor detecting the flash is shorter than if you were pointing at block number 12.

The program shown here is still very basic, as this is just to demonstrate how the pen works, but by studying the program, you will find itquite easyto adapt tosuit your own applications.

To adapt the program for your own routines, delete lines 30-150, 300-420 and 740-860. Alter the variables at line 160 to suit your own requirements and change the options in lines 170-280.

Study the menu control routine in lines 440 – 650 to see how it works and you will soon be able to write programs of your own that include the lightpen.

● The LITEPROG.BAS program is on Side B of this month's covertape.



■ **Not bad for a few K of BASIC! You'll find *Liteprog* on this month's covertape (side 2).**

ROM at t

£59/£79/£125 • BRUNNING SOFTWARE • 0255 862308

***Brunword* has always been one of the quickest, most proficient word processors on the Amstrad, not least because of its memory-resident (on the 6128) spellchecker and *Infoscript* database. Now, though, Brunning Software has produced the ultimate version – on ROM. Is this now the best CPC writing package money can buy? ROD LAWTON finds out...**

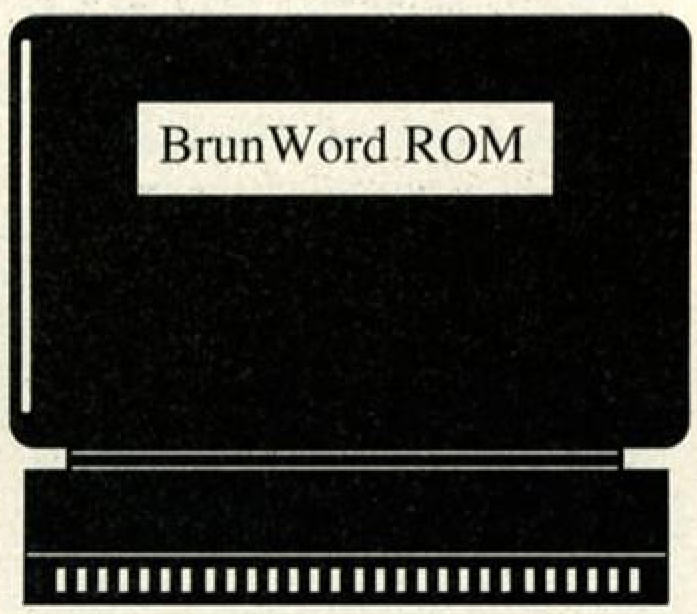
Word processing

The *Brunword* word processor is the heart of a highly complex and powerful package. Yet in itself it's quite uncomplicated and easy to use.

That's the beauty of the system – you can just sit down and start typing, without really knowing anything about the program... except that within a few seconds, unless your typing is very accurate, the machine will bleep at you.

Is something wrong? No, not a bit of it. It's just that the program is checking your spelling as you type! Full details are in the Spellchecking section of this feature. For now, just carry on regardless (turn down the volume if the spellchecker irritates you).

OK, so you've typed a few hundred words. It's a wise precaution now to save your document. Hit the Esc key and you can now choose any of a number of actions via a command line that appears at the bottom of the screen. For a full menu of options, hit Esc again. The list includes commands to load from or save to disk, cat your disks, format them, copy marked text, print, carry out a final spelling check... there's not enough space here to cover all the options. What does need mentioning, though, is that since *Brunword* operates from ROM, it doesn't use up vast quantities of the machine's RAM. Which means there's lots of space for temporary file storage. *Brunword* operates in a specific 'work area' of RAM, but files can also be stored in a 'file' area. You can transfer files from disk to this 'file area' and subsequently 'load' them in a fraction of the time.



This neat little box, which plugs into your CPC's expansion port, packs a word processor, spellchecker, print enhancer and relational database!

Right, saved your file? Good, now you can carry on typing – and learning more about the program. The thing is, although *Brunword* is simple to use, it does allow some quite fancy layouts, and can generate them quickly too. It does this via 'temporary margins'. These are easy to set up and allow you to inset individual paragraphs both from the left and right margins. The more you experiment with this feature, the more you appreciate its versatility.

Spellchecking

Brunword's spellchecker has always been fast. Up until now, though, it's functioned like normal spellcheckers. When you've finished typing, you go through your text checking for errors.

But *Brunword's* spellchecking routines were so fast they allowed the next logical step – spellchecking in real-time. In other words, in the time it takes you to get from one word to the next, the program can look up the word you've just finished! The *Brunword* ROM stores a dictionary of some 33,000 words, yet somehow the software still manages to scan through them up to 400 times a minute! For various technical reasons, this limit may be slightly lower at the very beginning of documents. Pretty academic, though, since *no-one* can type that fast.

Whenever the machine bleeps at you, you can either ignore the error and carry on typing, go back and fix it or look up the offending word. If you look it up, *Brunword* carries out a two-level search looking for close matches the first time, but casting the net

Which one for you?

464 ROM MODULE £59

The 464 isn't a machine you'd normally associate with word processing because it has only 64k of RAM and no disk drive. You can get word processing software on tape, but you wait an age for it to load and there's hardly any RAM left when it has.

But with the *Brunword* ROM there's no problem. Loading is instantaneous and leaves the whole of the 464's RAM free! Documents must still be loaded from and saved to tape, of course, but this is no big hassle.

The 464 ROM module does not feature either Infoscript or the Elite printing system, but it still has that fabulous instantaneous spellchecker.

6128 ROM MODULE £79

This ROM features naturally features the instant loading and spellchecking of the 464 version, but this version also features the excellent *Infoscript* database.

The 6128 ROM module, far from being simply a word processor, is actually a pretty powerful integrated business package. *Brunword* incorporates powerful and versatile mail-merge features that, in conjunction with *Infoscript*, offer an excellent package to anyone running a small business, club or society. Should you want to advertise your business, or produce impressive business letters, though, maybe you need *Brunword Elite*...

ELITE ROM MODULE £125

This is the ultimate word processing package. Not only do you get the as-you-type spellchecker and the *Infoscript* database, you also get a unique printer control system (works with any modern Epson-compatible, but check first) that produces output of truly stunning quality.

You get a range of fonts and type sizes, all printed at uncanny quality, and the ability to produce layouts as complex as those produced by a CPC dtp package (*Brunword* can import graphics!) – but at far higher quality. The *Elite* printing system takes a bit of learning (an understatement), but by gum it's worth it.

he top

wider if you still can't find the word you want.

The spellchecker works in the traditional fashion too. At the end of your typing session you can check all your text at once (some people may prefer this to having their rhythm interrupted while they're writing).

A combination of intelligent program planning, highly efficient coding and the fact the spellchecker/dictionary is entirely memory-resident (being on ROM!) makes this the fastest/most efficient spellchecker anywhere.

Printing

This is where it gets complicated. The standard *Brunword* program produces entirely acceptable printed output which is more than a match for that provided by its competitors.

However, using the *Brunword Elite* module, it's possible to achieve some truly spectacular printed output. *Brunword Elite* was originally designed for 24-pin printers. Amongst other things, it provided a range of additional 'downloadable' fonts. The system has now been modified to work with 9-pin printers too.

The latest version of *Elite* allows incredibly precise printer control, microspacing, proportional printing, multiple-column printing... much more, in fact, than can be explained here. Be warned, though, it's complex stuff. But for a demonstration of what the program can do, you may like to know that the *Brunword* ad in this issue was composed entirely using *Brunword Elite* and printed out as a single document. That speaks for itself.

That's not all. The latest innovation, System 2 printing, provides 'auto-formatting'. All you have to do is position your text on-screen roughly to the left, centre or right, and the program will print it out aligned exactly with the left margin, centred exactly or aligned exactly with the right. It's all part of the *Brunword* philosophy of making excellent print/layout quality as easy as possible. And you can't get much easier than System 2!

Infoscript

Infoscript has been an integral part of the *Brunword* suite for some time. It's a memory-resident database especially suited to mail-merging (using *Brunword*). In its latest incarnation on the *Brunword* ROM, it's a powerful and versatile beast.

You enter *Infoscript* from the main menu and straight away (instantaneous loading, don't forget!) you are presented with a blank grid for typing in your first name and address. This 'standard' format can in fact be edited later on. As you'd expect, Finds and Sorts are fully supported. *Infoscript* has another trick up its sleeve, though – record-linking.

This has two purposes. The first is to allow you to store as much information as you want, despite the fact that single records can only display a screenful of data. Any number of cards relating to the same individual, for example, can be linked to allow for the information 'overflow'. You will normally only scan the 'parent' card, but the others can be viewed at will. Secondly, quite dissimilar cards can be linked. For example, you might link a card carrying details of a golf club member with another showing his golfing handicap. It's rather like looking through one filing cabinet for a card and finding a cross-reference to another card in another drawer.

Infoscript is a formidable piece of software engineering. The fact that it's instantly accessible from *Brunword* makes you realise just how powerful this whole package is.

BETTER THAN *PROTEXT*?

The Brunword ROM is a truly excellent product. But we at *AA* are always raving about Arnor's *Protext* – so how do the two compare?

Judged purely as a text-processor, *Protext* is still ahead. Arnor's program is not only extremely fast and efficient, it uses proper Tab characters and not *Brunword's* quirky system based on spaces.

As a complete writing package for CPC owners, however, *Brunword* is tops. *Protext* may be cheaper, but unless you get the CP/M version you'd have to spend out on extra modules in the *Protext* suite (*Promerge, Prospell, Protype*) to match the *Brunword* specs. And it still wouldn't match it for overall speed.

good news

- Instant loading
- As-you-type spellchecker (up to 400wpm!)
- Leaves all your machine's RAM free
- Not just a word pro, but an integrated package

bad news

- Uses spaces rather than proper Tab characters for paragraph indents and temporary margins
- Not cheap!

93%

VERDICT

Peter Brunning says...

Peter Brunning is the man who invented *Brunword*, way back in the mid-'80s. Since then he's constantly refined and honed the product until it's reached its ultimate stage of development – a ROM module (three different versions are available) that plugs straight into the back of your machine. We spoke to the man himself to find out more...

AA: What made you write *Brunword*?

PB: "I was going to write a book! So the first thing to do was write the word processor to do it with. And I got a bit carried away..."

AA: What did you think was wrong with existing word processors?

PB: "The thing about a word processor is you shouldn't have to spend half your life learning how to drive it. If you want to write a book, you want to just sit down and start using it immediately. That's the principle of *Brunword*: you start to write your book and as you go along you realise you've got quite a good word processor."

AA: You obviously thought the CPC was the machine to write for.

PB: "If you go back five years, the only computer one could think about as a home computer was the CPC. The only reason people have gone for the PC is the masses of memory and greater ease of programming. From an actual writer's point of view, the CPC is a brilliant computer."

AA: Perfectly adequate, then?

PB: "Oh, not just adequate. It is actually the *rightt* machine because it's so easy to use. You think of the average person buying a PC – they're going to be absolutely daunted for the first few weeks. They're not going to know where to start."

AA: You think it's a bit sad, then, that the CPC is in decline?

PB: "I think it's deliberate, quite honestly. I was reading *AA*, as it happens, the bit about *AA* wanting to reprint the [Firmware] manual. Why would Amstrad refuse? They weren't going to do it themselves, so why stop you doing it? The answer is, they don't *want* the machine to succeed. They're thinking all these people are going to upgrade to PCs, and they're likely to be *Amstrad* PCs..."

AA: What about *Brunword* – are you going to do any more with it?

PB: "As far as the CPC is concerned, what's missing is RAM. The cheapest 256K [expansion] I could market would be about £80. What I would *love* to do is have an on-screen vision of *Brunword Elite* before you print it. That requires something like a *megabyte*..."

"I think the truth is that *Brunword* on ROM now is hitting the end-stop for what is actually achievable on this computer."

PD

Public Image

Gather ye misers, money-grabbers and suchlike! This is the page for you! With all software under a quid, you can't go wrong, and he-e-ere's your host – TIM BLACKBOND! Okay, settle down – I've a lot to get through! Take notes, there will be questions at the end...

LOOSE TALK

WHERE THE HELL IS ADAM SHADE?

You would not believe the number of letters of complaint I've had regarding the self-styled founder of Dartsma PD, Adam Shade. All the letters had the same basic gist – 'Why hasn't he returned my order that I sent five months ago?'. I, myself, haven't heard from him in a long while, although rumour has it that he has been reorganising his library and has visited Wales. Mr. Shade, return these people's orders, now!

CHANGES AT PRESTO!

After being accused of having 'not many words for your wonga' in this journal, Presto News makes use of *PowerPage* and is definitely value for money! From issue three, *Presto News* will have a new adventure columnist and will be bi-monthly. The software library has had to stop supplying PD in the MS-800 3.5" format due to the fact that it wasn't compatible with CP/M 2.2 (but then, what is?!).

POWER PAGE 128

Work has begun on the sequel to the top-selling public domain DTP package! Not only will all the menu options be under the same memory, but we can now confirm a host of new features, including a fast pattern fill option!

EXCLUSIVE FEATURE!

It's an absolute exclusive, this. I haven't even put it in the 'Other Magazine' (*Artificial Intelligence, he means – ed*) yet! Want to hear (read?) my Phil Howard impression? 'Malcolm Dowse from sunny Dublin has produced this poke that changes the speed in the excellent French game, *Croco Magneto*!' Do NOT try speed 255 unless you have a LOT of patience.

```
1 ' Croco Speed Poke
2 ' By Malcolm Dowse
3 ' AA Public Image Issue 84
10 FOR a=0 TO 2:READ A$
20 p=VAL("&"+a$):POKE &BD19+a,p
30 NEXT
40 INPUT "Enter speed 1-255. 255 is the slowest: ",sp
50 IF sp<1 OR sp>255 THEN 40
60 FOR a=0 TO 5:READ A$
70 p=VAL("&"+a$):POKE &BE80+a,p
80 NEXT
90 POKE &BE81,sp
100 RUN"croco"
110 DATA c3,80,be,06,ff
120 DATA 76,10,fd,c9
```

Alternatively, if you want a quick way to witness the fastest Croco can go (ie. very!), just type the following, then load the program as normal:

```
POKE &BD19,201
```

GUNSLINGER
By Dominic Walsh

It's high noon at Boot Hill, and there's two cowboys out to prove that the town isn't big enough for the both of them (it's not even big enough to find a decent parking space, that's how bad things are getting). You and a friend can spend joyful hours trying to kill each other by means of filling them with lead. Not what you might call brilliant, but hey! It will keep the kids quiet for half an hour! It remains faithful to the original coin-op. ●●●

PD PLANNER
By Paul Dwerryhouse

Paul Dwerryhouse's spell checker, *I-Spell*, received five 'blobs' last issue, and it looks as if he's going to get another five. *PD Planner* is the best spreadsheet package you'll find in the Public Domain. Looking a lot like *Lotus 1-2-3*, it offers the most features this side of *MasterCalc* and (need I say it?) is a hell of a lot cheaper! Overall presentation is top-notch too – highly recommended. ●●●●●

TANX
By John Girvin

Honestly, what is wrong with the world?! After getting bored of running around a Western town killing your closest friends, you can now hop inside a huge tank and finish him/her off completely! This is done by selecting the velocity and angle of your missile and hoping it lands on the head of your adversary! The action takes place over a number of different screens, which adds variety to the game! It's among the quality PD games list... ●●●●

PROWORD
By Graeme Chesser

A simple but effective text editor that offers slow justification, centre line, insert/delete lines and dump to printer. It won't win any awards for computing excellence, but would be perfectly suitable for a note to the milkman. If you're writing a novel (What an original thing to say in a word-processor review!), then you'd best look elsewhere. ●●●

FLIK
By Richard Moulton

This utility allows you to load two programs into the 128K memory at once and flick (hence the name) between them at the press of three buttons (CONTROL, SHIFT and TAB). One minute you can be enjoying a nice game of *Drehdriss* then Zap! You can continue with your homework! A very useful little proggie! ●●●●

FINALLY...

If you have anything at all to say about the CPC PD 'scene', be it complaints or compliments, then scribble them down and send them to me at: 19 Lee Street, Liversedge, West Yorkshire, WF15 6DZ. Cheers...

Directory

A whole host of new libraries for your delectation this month, punters. Stock up on blank disks and SAEs, here come those addresses...

HEX HEROES PD LIBRARY, Richard Marra, 24 Woodend Lane, Stalybridge, Cheshire SK15 2SR. Send SAE for a catalogue (both disks and tapes).

WORLD PD, c/o E Williams, 111 Riverside Road, Orewa, Hibiscus Coast, New Zealand. £1 (inc postage) gets you a catalogue of German, French and British PD software from a library the other side of the globe. Cor!

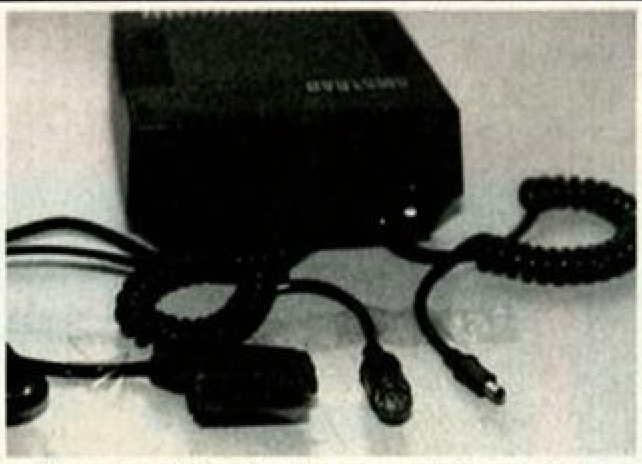
GD PD SOFTWARE, 49 Woodville, Barnstable, N Devon EX31 2HL. A small but growing selection, GD are in the process of importing some PD stuff from Australia.

GNASHER PD, 36 Sweetmans Road, Shaftesbury, Dorset SP7 8EH. Mostly self-penned stuff, and only 50p per disk side or £1 per C90 cassette.

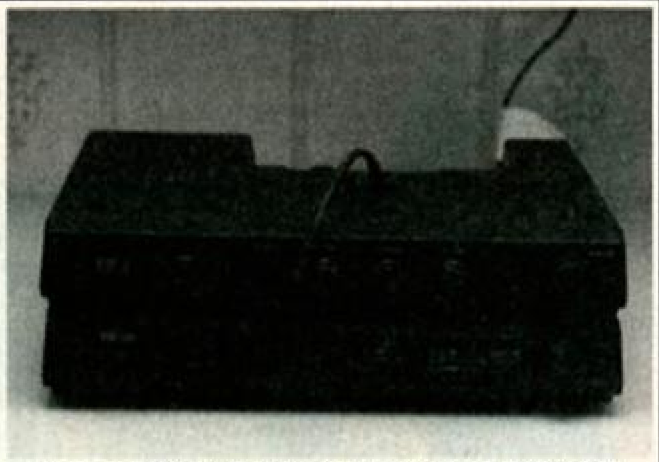
A SMALL SELECTION FROM OUR WAREHOUSE



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walk this way — Getting going: If you want your new printer working prop



1 UNPACKING THE PRINTER

The LC-200 is a pretty heavy beast, so when your dog is curious to see what this new arrival is, try not to drop it on him. It should be placed on a flat surface (not carpet) as you open up the box and take out the contents.



2 INSERTING THE RIBBON

You'll need to do this before you can print anything. Both colour and black-and-white ribbon cartridges are supplied: choose the one you want. They slot in easily, but be careful that the ribbon actually does go between the print head and the shield.



3 FITTING THE SHEET FEEDER

This fits easily enough into the slots provided on the printer. Of course, if you're loaded with cash and you've forked out for a tractor feed or an automatic sheet feeder for your new toy, you should fit those instead!

Colour P

Colour printing is a tricky business. Just as well we've got RICHARD FAIRHURST here to explain it – and take a look at Star's LC200 colour printer and MJC's *Colourdump 3* software...

There was a time not too long ago when colour printers would cost you well over £500. These days such printers are available for around half that, and at these prices many CPC users are paying the comparatively little extra over normal black-and-white printers to get colour models. However, many people are still unsure as to what you can do with these beasties: for example, one advert suggests that you 'call for advice' before ordering one.

The main use for colour printers is to be able to print out pictures created with art packages, such as *Advanced Art Studio* and *GPaint* (as featured on our covertape), in glorious technicolour. The routines supplied with the programs only support either pure black-and-white or shaded screen dumps. However, it is possible to buy a program such as *Colourdump 3* (reviewed on this page) to print pictures saved from the art package in colour.

Desktop publishing? Not a hope, unfortunately. This is really for programming reasons only: MODE 2, as used by all desktop publishing programs, supports only two colours, so editing a colour page would be tricky. Another problem is that a mono page can take up around 50k of memory: even on 128k machines, adding two colours would double the amount of memory taken up! However, if anyone would like to take up the challenge...

Fortunately, when it comes to word-processing applications, colour printing is much easier. All you need to do to print coloured text is to define a printer control code from within the program, which will send the colour instruction to the printer. Imagine you want to make a phrase stand out, but the usual methods of doing this (italics, underlining and bold text) aren't dramatic enough: there is no better way than printing it in a different colour to the rest of the article. (As with all such features, though, use restraint!)

Programming a colour printer

While you're waiting for your copy of *Colourdump* to arrive, no doubt you will be itching to produce some print-outs in colour. There is a myth that colour printing is difficult. Nonsense! Although graphics are a bit trickier, printing text on the LC-200 is an absolute doddle.

The basic principle is that a code must be sent to the printer to tell it to change colour, which consists of two opening brackets, a letter, two closing brackets, and a number: for example, ((C))1.

What the number and the letter should be varies according to the effect you want. To change colour, use the letter C and a number from 0 to 6 (for example, 2 for blue). The font to be used can be selected by F and a number, and character size requires S and 0 (normal) to 3 (double width and height).

If you're using *Protext*, you can store any of these as a control code using SETPRINT. For example, to set code R for red text, type SP, press N, Y ("alter control codes"), type R, and input the code 40,40,67,41,41,49. (This is the same as ((C))1: the appropriate numbers are printed in the LC-200 manual). When prompted for the off code, enter the code for black. There you have it: different colour text simply by pressing CTRL-X and R. Easy!

STAR LC-200

£299 • Star • 0494 471111

More CPC owners have a mono, 9-pin dot matrix printer than any other sort, a typical example being the Amstrad DMP series. What more could you want? Well, a Star LC-200, for a start...

Maybe it's the range of excellent NLQ fonts provided, none with a character out of place, and all easily selected using the front control panel. Maybe it's the fact that you can print text in one of four different sizes, in whatever font you like, whatever colour. It could even be the fact that this is the easiest printer to program I've ever seen: you can do a very wide range of things using the front panel, such as setting font and colour. In addition to being Epson-compatible (so all your existing programs will work), the extended features (colour, font selection and sizes) are selected not with awkward escape codes, but with single-letter codes in double brackets followed by one number, which can be generated by ANY word-processor.

Perhaps it's simply the excellent build quality? Paper can be inserted any way you like, through the top with the supplied sheet feeder, using the tractor feed at the back, with an optional automatic sheet feed mechanism, or even through the bottom. If you're looking to upgrade your existing 9-pin, but don't want to spend too much money, look very carefully indeed at this model.

good news

- Superb NLQ output
- Solidly built
- A wide range of fonts and sizes
- Easy control of typeface and text size
- Built-in tractor feed mechanism

bad news

- Manual a bit PC-oriented

94%

VERDICT

rly, you have to be systematic. Here's our no-tears guide to setting up



4

INSERTING PAPER

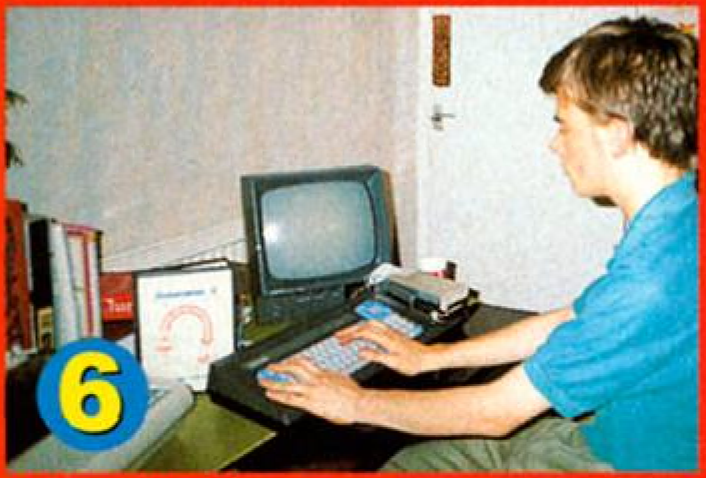
The sheet feeder copes with one sheet at a time of almost any size of paper: the margins should be adjusted so that the paper fits correctly without any room to wobble. Avoid making it too tight, though, as the paper may not be drawn in properly.



5

PLUGGING IT IN

You'll need a Centronics printer to CPC lead, available from most CPC stockists. Ask for one with pin 14 disconnected, to avoid double line feeds. Oh, and make sure that you plug the lead into the CPC the right way up!



6

READY TO GO

Switch the printer on and place it on-line (erm, by pressing the On Line button on the front of the machine). It's then ready for action with the program of your choice! Oh, and don't forget to read the manual sometime...

rints



■ MJS Supplies' *Colourdum 3* program will let you produce colour print-outs from CPC art packages.

What about your own programs? Printing anything other than pure text has traditionally involved 'escape codes', a sequence of characters starting with the ESCape character, CHR$(27). The popular Star colour printers use a much easier method of accessing colour printing: a single-letter code is surrounded by double brackets, and followed by a number indicating which colour is to be used. Escape codes must still be used for traditional features (italics, different spacing, etc.) but the new codes are easier both to use and to remember.

Don't rule out a colour printer simply because you can't see any immediate need – any colour printer will work perfectly well in black-and-white too, and you've always got that potential for colour.

Colourdump 3

£15.95 • 128k ONLY (NOT CPC 464)
MJC Supplies, 2 The Arches, Icknield Way, Letchworth, Herts SG6 1UJ • (0462) 481166

Probably the first thing you'll want to do when you get your colour printer is print out a masterpiece you prepared earlier in colour. One problem, though: load up *Advanced Art Studio*, *GPaint*, or whatever you use, and select the 'Print' option and it will still appear in black-and-white.

The reason is that these programs were written before colour printers became widely available. As a result, a separate program is needed to print pictures in colour, and here it is: MJC's *Colourdump 3*, the originally titled follow-up to *Colourdump 2*. This program, for use with Star colour printers, prints out any screen file in colour. As the only such program currently on the market, it's an essential purchase for any colour printer owner.

First of all, though, a warning. *Colourdump 3* is slow. Very slow. The main reason for this is that it doesn't use all 9 pins to print with. A MODE 1 printout in Colourdump 3's 'small' size took 12 minutes, with the example (MODE 0) screen in 'large' size clocking in at just under 45 minutes!

The major advance of *Colourdump 3* over version 2 lies in its ability to read different types of screen files. As well as standard 17k binary files, *Advanced Art Studio* files are supported, with the .PAL files being used to avoid you having to enter the colours manually. One particularly impressive aspect is its ability to read compressed *Art Studio* files. In addition, Multiface files are supported, which means that you can grab a screen from a game and print it in colour. But although *Colourdump 3* will find the colours from the Multiface file and display them on screen, you must copy them down yourself, then restart *Colourdump 3*, load in the converted Multiface file, and manually enter the colours again.

In addition, there are a few formats which the program does not support. Files squeezed using Dragonbreed's *SQ23*, the most popular format for PD slideshows, are not supported. Although *GPaint* screen files can be loaded, *Colourdump* does not recognise the palette settings embedded in the 17k file. Surprisingly, screens squeezed with Goldmark Systems' squeezer are not supported, even though the author writes a lot of software for Goldmark.

What of the output? A big thumbs up here. No less than three different sizes are supported (Small, Large single density, and Large double density), and the quality on each is truly splendid. MJC deserves special congratulations for not falling into the trap encountered by many screen-dumps, because even when a large area of one colour is printed, the colour still remains solid rather than streaky.

Finally, there are a few bugs. When the program resumes after printing a picture, instead of printing another one at your choice, the menu option just causes it to stop. Error-trapping could be better (you can enter negative numbers as inks!), and the program doesn't get on with ROMs. One error in the manual, about saving files from BASIC, is particularly irksome and could ruin any such screen files.

None of these bugs make it unusable, though. The program is worth getting simply because it's the only one on the market, and because the output quality is very good. There are quite a number of aspects of the program that let it down, though: perhaps these will be seen to with *Colourdump 4*?

good news

- High quality print-outs
- Copes well with *Advanced Art Studio* files
- A good choice of print-out sizes

bad news

- Very, very slow!
- Some annoying (although not fatal) bugs
- Multiface screen handling is awkward
- Squeezed or GPaint files not supported

69%

VERDICT

WATCH THIS CYBERSPACE

Welcome to that place where people and machines meet, where fantasy becomes reality, where the human mind and the computer environment become as one... let ADAM PETERS be your guide as we journey to another world: the world of virtual reality.

Virtual reality *n;* a computer generated environment that, to the person experiencing it, closely resembles reality. [*Collins English Dictionary*]

Visualisation, that's what it's all about. A situation in which you're not just able to see the computer world you're moving around, but you're able to explore it fully, walking where you like as fast as you like, looking around in all directions, feeling like you're really 'there'. It's called virtual reality, it's new, it's hip and its potential is virtually unlimited. So how did it get here? What came before? What comes after? And where? And how? And why?

THE PAST

Early attempts at computer 3D centred round vector graphics (a load of old lines and stuff). *Star Wars* was an early coin-op in this style, but lots of early black-and-white arcade machines aspired to some sort of notion of being 3D. The 'lines' approach gave the illusion of moving fast in a certain direction, and has been seen on the CPC in a more colourful form in games like *Bobsleigh* and *STUN Runner*.

The real advancement in this area for home computers came with the arrival of Incentive's *Freescape* system in 1987. Following on from its first game, *Driller*, Incentive went on to produce a further three full-price games. *AA* awarded the four *Freescape* games between 91 and 96 per cent on their original releases. With their filled 3D and fully explorable objects, these games revolutionised most people's idea of what computer games could be like.

Meanwhile, other systems were appearing on professional design systems. Computer aided design (CAD) saw many advancements, as 3D modelling became the norm for designing everything, from cars to buildings to electronic circuit boards.

Meanwhile two organisations in America (NASA and VPL) and one electrical expert in Leicester (Jonathan Waldern) had been developing helmet-mounted systems that placed the user deeper within the 3D environment than had previously been possible.

It is these systems that are what we currently refer to as virtual reality, though the phrase can reasonably be applied to anything from the primitive 3D of early computer games to the highly advanced true-to-detail virtual worlds we can expect to be able to explore in the semi-distant future. It's just a case of how close to reality you need to be to justifiably call yourself 'virtual'.

THE PRESENT

There are currently twelve different virtual reality arcade games in existence (all produced by W Industries, the company behind the Virtuality →

Virtual Gardening VR films

'The world's first virtual reality film', says the press release for *The Lawnmower Man*, First International's recent cinema release.

The film centres around a retarded gardener who becomes the subject of an experiment to raise his intelligence through mind-altering drugs and trips into a virtual reality world.

Of course there's a big bad corporation involved; Cybertech, which has other plans for Jobe (the gardener). This big, bad corporation has been using virtual reality technology and nasty drugs to turn chimpanzees into psychotic killers. Now its wants to do the same with Jobe. Of course.



VR MAKING HISTORY

1984 William Gibson's *Neuromancer* is published, the first piece of fiction dealing with adventures in a computer-created environment.

1984 Englishman Jonathan Waldern designs (on paper) the world's first VR games system.

1985 NASA Research Centre announces a head-mounted 3D display system.

1985 Videoplace opens at the Conneticut Natural History Museum, a video-based VR system that allows people in separate rooms to interact as if sharing the same space.

1986 NASA commission VPL to produce a glove for their VR system. VPL boss Jaron Lanier coins the phrase 'virtual reality', and VR as we know it is born.

1987 First *Freescape* game, *Driller*, makes its debut on home computers (including CPC).

1988 Jonathan Waldern and colleagues produce the first prototype VR games machine in a garage in Leicester.

1991 Waldern's company, W Industries, launches the world's first virtual reality entertainment system (Virtuality 1000SD).

1991 The world's first multi-player VR game, *Dactyl Nightmare*, is installed in the Rock Garden club in London's Covent Garden.

1991 Incentive and Domark release *3D*

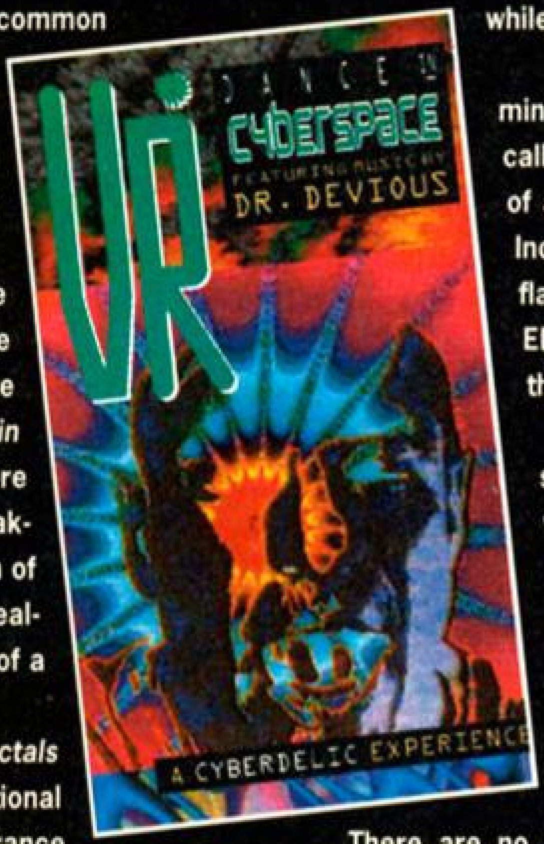
everything gets totally out of hand and Jobe becomes God (or something like that).

The film's main talking points are the VR sequences, which feature some of the most mind-blowing computer-generated graphics ever seen. These were produced by two different companies, San Francisco's *Angel Studios* and *XAOS* of San Diego. Sadly, the film itself fails to live up to the standards set by the visuals.

The Lawnmower Man isn't the first film to have actors wandering round a computer environment though. Ten years ago Disney gave us *Tron*, a children's film cashing in on the emergence of home computers. It told the story of a bloke sucked into a computer, who then spent the rest of the film riding space bikes and throwing discuses. It wasn't virtual reality though, the bloke was really supposed to be inside the computer. But then that's Disney for you.

Rave new world
VR visuals

The rise of virtual reality has come at the same time as the emergence of 'rave culture', and the two concepts have found themselves in many ways linked. Raves have been organised where it is VR landscapes, as well as the more common fractals (mathematically-produced multi-coloured swirly things), that are displayed on giant screens above the happy dancing throng.



And now ravey VR visuals have hit your video stores, with the arrival of Dr Devious' 40-minute music vid, *VR – Dance in Cyberspace*. While the hardcore and techno booms from the speakers, on screen up pops a selection of fractals, 3D shapes and virtual reality landscapes (including footage of a VR game being played).

Another video, *The Fractals Experience*, hasn't got any traditional VR sequence in it, but its appearance within days of the Dr Devious vid indicates there's more of these to come.

Rave culture, with its links with perception-enhancing substances and its reliance on increasingly mind-blowing visuals (lasers, strobes and so on), is probably the ideal entertainment form for the world of virtual reality to start making inroads into. There's even a rave band called Virtual Reality!

Machines gunning for you
VR coin-ops

So you want to experience virtual reality yourself? What do you do? Where do you go? Make a bee-line for the basement floor of the Trocadero centre in Piccadilly Circus (London) and the world's only virtual reality arcade, Virtuality.



The Virtuality arcade consists of four connected machines, which look like standard racing coin-op cabinets. You sit down with a pedal under each foot, a lever by your left hand and a steering wheel in front of you. A glamorous assistant then puts a helmet on your head and screws it into your skull (sort of). And now you're ready to go. Providing you remembered to pay £2 for your Virtuality card and queued up for a while (a few minutes normally).

Your £2 buys you about three minutes' worth of play. The game is called *ExoRex*, and you're in control of a Medium Armour Normal Terrain Incursion System (MANTIS). Sounds flash, but in fact it's another of those ED209/Dreadnought type machines that crop up in loads of games.

The action takes place in a small three-dimensional city, which consists of the usual rectangular blocks trying to pass off as buildings. Your view is similar to what you see through a pair of binoculars, with the game taking place at the end of a long, dark passage.

There are no computer opponents – you're up against the three people in the other helmets. All four dreadnoughts wander round the city: shoot theirs as often as you can, whilst trying not to get shot yourself. It's terribly addictive, especially since you know you're competing against other real people, normally Spanish kids who are about three feet tall. It can get dead frustrating to lose to them, but try to avoid the temptation to violently force them back into the chair for a re-match (the staff don't like it).

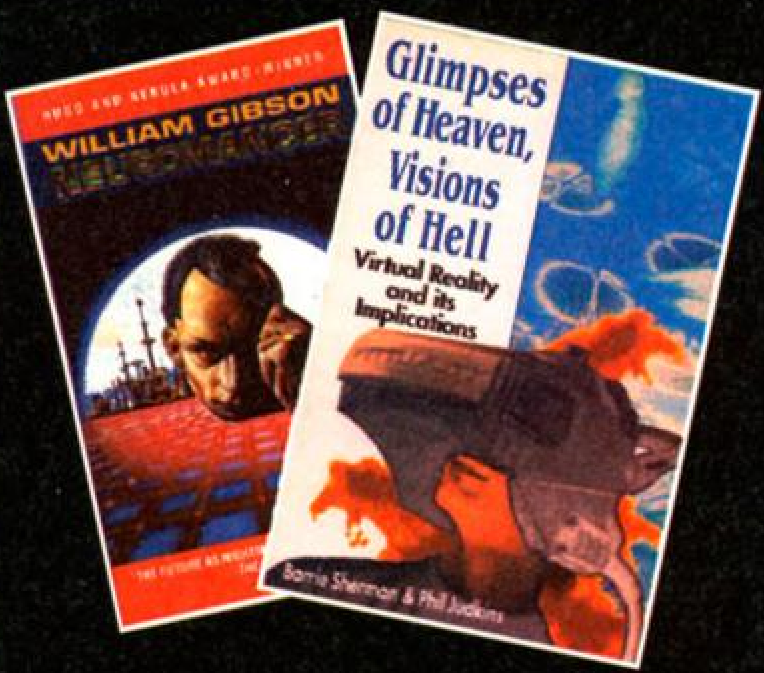
And when you get bored of all this you can always travel to the first floor of the Trocadero, where you'll find an arcade containing a few individual VR machines, 400 conventional coin-op games (including some spinny, shakey *R360s*), a laser bowling alley and a laser combat game (*Quasar*) where you can chase your mates round a maze shooting bits of light at them.

Crikey, and I remember when it was all just poncy restaurants!

The Neu Romantics
VR books

One day (in 1984) a bloke called William Gibson wrote a book called *Neuromancer*. The hero, Case, is an expert hacker and traveller through cyberspace, who has been blackmailed into doing a job for some bad dudes. Most of the action takes place inside 'cyberspace', an artificial environment where people can interact fully with computers. The computers exist as physical entities within the world, and many include defence mechanisms that can kill – for real.

Neuromancer invented a new genre. A 1991 documentary called *Cyberpunk* explains everything in detail. Basically, Gibson's world was one where computer networks possessing artificial intelligence controlled most aspects of people's lives, and heroic



computer hackers were the ones fighting for freedom and liberty and all that stuff.

Other VR fiction? That's the lot so far. Even Stephen King's *The LawnMower Man* short story didn't have any virtual reality in it! (King is currently trying to get his name removed from the credits.)

As for non-fiction, the first two books on VR were actually published during the time this article was being written. The first, *Virtual Reality Playhouse*, is an interactive package (book plus disk) for IBM-compatible owners. The second, *Glimpses of Heaven, Visions of Hell: Virtual Reality and its Implications* by Barrie Sherman and Phil Judkins, is both cheaper and of more academic interest.

The book charts the history of VR and theorises about possible future developments. Its conclusion is that for all the positive things VR could bring, there are an equal number of negative things. Like gunpowder and nuclear fission before it, its creators believe they are producing something to benefit all society. Our masters of war might have something different in mind, though.

Sleep tight, readers...

Construction Kit, an application that allows home computer users to create their own VR environments.

1991 Mattel's *Power Glove* (based on VPL's DataGlove) goes on sale to Nintendo owners in the US.

1991 VR shops open in Leicester and Cardiff.

1991 A video-based VR system (*Mandala*) goes on sale in Britain.

1992 The *Lawnmower Man* opens in cinemas, 'the world's first virtual reality film'.

1992 *Virtual Reality Playhouse*, an interactive *Superscape* package, comprising book, PC disk and 3D glasses, is published.

1992 The first two serious books about VR (*Glimpses of Heaven, Visions of Hell* and *Virtual Worlds*) are published as this article is being put together. What next...?

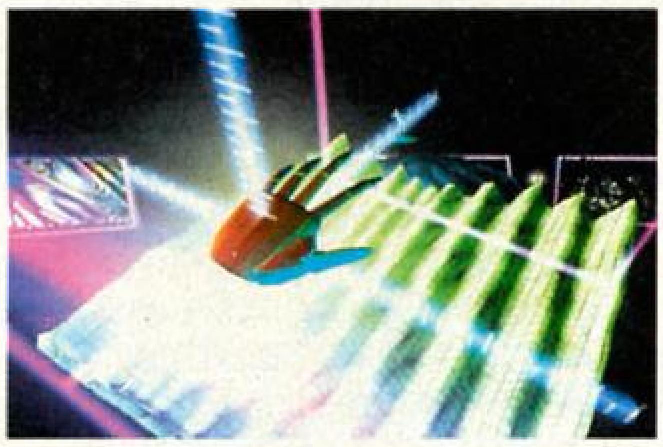
WATCH THIS CYBERSPACE

games system). These games range from robot combat in a future city, fantasy world exploration or prehistoric dinosaur-wrestling with other human players, to individual journeys into the cockpit of a harrier jump-jet or space fighter.

W Industries is currently developing a very advanced computer graphics processing chip that will allow you to map someone's face on to a character in the VR world. As for the company's other plans, Chris Yewdall told *AA*: "we are concentrating on delivering more varied and more detailed software experiences for the player in the virtual reality world."

Two virtual reality shops have also recently been opened, one in Cardiff and one in Leicester. The shops' design is based around a Virtuality machine (which customers can play on) and the chain aims to display new systems and new VR technology as it becomes available.

CPC owners have recently been given the opportunity to create their own virtual worlds, using



■ Give him a hand – VR visuals from The

virtual reality' it announces on the program's packaging. "It's a wonderful way to start learning about VR," says Ian Andrew of the program's developers Incentive Software.

Elsewhere, the more advanced *Superscape* system has also recently started to spread its wings, with the arrival of the *Virtual Reality Playhouse* disk-cum-book. Professional use is also starting to take off. Virtual reality systems are very useful for people like architects and interior designers, allowing them to fully 'visualise' their creations before resorting to bricks and mortar.

A VR kitchen showroom is up and running in Japan (you put on the headset to view the kitchen design, moving things around till you're happy with it all). Virtual reality systems were used to visualise the re-designed King's Cross station. A video-based Japan (you put on the headset to view the kitchen design, moving things around till you're happy with it all). Virtual reality systems were used to visualise the re-designed King's Cross station. A video-based VR system, *Mandala*, is currently on sale in Britain, and Nintendo users in the States can make use of Mattel's primitive but fun *Power Glove*.

THE FUTURE

Anything can happen, the possibilities are literally endless. Here we'll list just a few of them. Ten years ago these would have all been dismissed as mere science-fiction fantasy, but remember that twenty years ago the concept of home computers would have been similarly laughed at.

In the future we'll probably see virtual conferences, where people separated by hundreds of miles meet round the conference table in a virtual world. Education will also benefit greatly from the new technology. School trips could take place within the virtual world, with parties journeying to medieval times, the rain forests, other planets. Indeed, anywhere under (or over) the sun. At the moment VR graphics are just a load of blocks. These will continue to be advanced till they look exactly like the real thing (in shape, in detail, etc).

Throw in various sensory attachments, and the future uses of VR are even more far-ranging. The systems could be used in physiotherapy, teaching accident victims to walk again (through giving them the 'walking experience' in the virtual world). There are also endless possibilities in sport, both as a training tool and as a setting for sport itself. How about virtual boxing? Just like the real thing, only noone gets hurt. Neutral cameras within the virtual world could relay the combat to the spectator (neutral cameras are already in use in many Virtuality games).

Recreational use also has limitless possibilities, from advanced computer games to more dubious uses (virtual sex with your favourite film star or a partner many miles away?). The technology is advancing all the time, and each further refinement turns another past vision of science fiction into current science fact. Plans are already at an advanced stage for a virtual zoo in Leicester!

or something, else. In VR we can choose to represent ourselves as anything we wish – a lobster or a bookend, a drumstick or Saturn. In effect we can live an infinite number of aliases. We shall also be able to comprehend the incomprehenisble – listening to electron densities; be in places we could never have seen – like the centre of the Earth; or see and feel sounds, good moods and bad vibes. It truly is the technology of miracles and dreams." [*Glimpses of Heaven, Visions of Hell*, Sherman & Judkins, 1992]

PLAY THE GAME

Virtuality VR coin-op machines can be found at the following locations:

AYR: Butlins Holiday World

the following locations:

AYR: Butlins Holiday World
BEDFORD: Aspects
BIRMINGHAM: The Zone (VR Club)
BOGNOR REGIS: South Coast World
CARDIFF: Beatties Virtual Reality Store
LEICESTER: Beatties Virtual Reality Store
LONDON: Rock Garden, Covent Garden
LONDON: Trocadero Centre, Piccadilly Circus
NOTTINGHAM: Legend Quest (VR Club)
RHYLL: West Coast World
SKEGNESS: Butlins Holiday World

The Trocadero contains ten VR systems, most of the other places contain a single machine. Four other machines are hired by companies in London and Preston, and these appear at shows and exhibitions around the country.

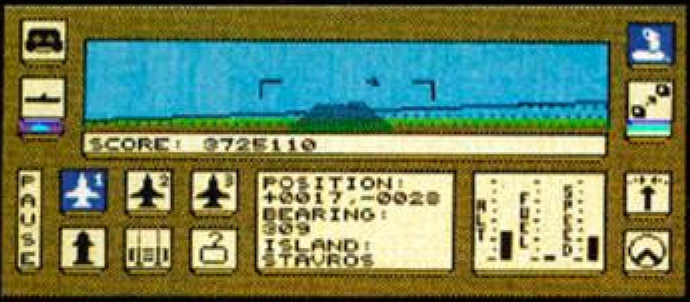
An Ext

the complete guide to interactive 3D games on the Amstrad



BATTLE COMMAND

This is the most recent of all the games listed here, and a great improvement on Loricel's *Sherman M4* (which looks quite similar). At the controls of a battle tank, you get a rotatable view of the landscape around you, a selection of weaponry, and various different missions to try. *Battle Command* is a fine example of how absorbing a 'virtual reality' shoot-em-up can be. **83%**



CARRIER COMMAND

For some reason, *AA* never reviewed this little beastie (we had to nick a Speccy screen shot from *Your Sinclair*). You're in control of an aircraft carrier, travelling around liberating islands. An enemy carrier is up to the same hi-jinks as you, though, and there's lots of shooting to be done. There's so much involved: one the best strategic shoot-em-ups of all time. **89%**





CASTLE MASTER

The most recent of the *Freescape* games, *Castle Master* is a medieval rom where, dodging various nasty ghosties, you have to make your way through a castle to save a kidnapped brother/sister. It loses marks because there's more dull walking involved than in previous *Freescapers*, but big fans of the genre will love it – there's simply loads to do. **85%**

ra Dimension

So what attempts have been made to generate interactive 3D (virtual reality style graphics) on the CPC? ADAM PETERS picks out some of the finest 3D games in the entire history of the world...



DARK SIDE

The second *Freescape* game is similar in many ways to the first (*Driller*). A bunch of bad dudes, the Ketars, are setting up a weapon that will destroy the moon of Tricuspid. The weapon gets its power from an inter-connected network of energy collection devices (ECDs). You have to disable all 25 by shooting them (in a special order). There's lots of tricky puzzles to tackle.

88%



STUNT CAR RACER

Graphics wise, this inhabits a sort of halfway house between vector graphics (just a lot of lines) and the *Freescape* style. You race around a narrow wall at the wheel of a drag car with another drag car for competition. The speed is breathtaking, the tactical depth is excellent and eight courses means a lot of long-term appeal. Is it virtual reality? No. Is it mega exciting? Yep.

90%



DRILLER

The very first *Freescape* game, with sound effects provided by the winner of an *AA* competition (really!). The object is to plug eighteen gas leaks on Mitral, one of the moons of Evath (the other moon, Tricuspid, is the setting for *Dark Side*). This was the first game that allowed you to move under, over, into and around solid 3D objects – CPC 'virtual reality' began here.

81%



TAU CETI

The best example from a whole bunch of vector graphics space exploration games. You naviagate (with compass a direction-finder) round a huge planet surface carrying out a complex, strategic mission. The graphics look a bit primitive compared to *Freescape* efforts, but the gameplay is superb. A place in history is guaranteed. [*Tau Ceti* appeared on the *AA61* tape.]

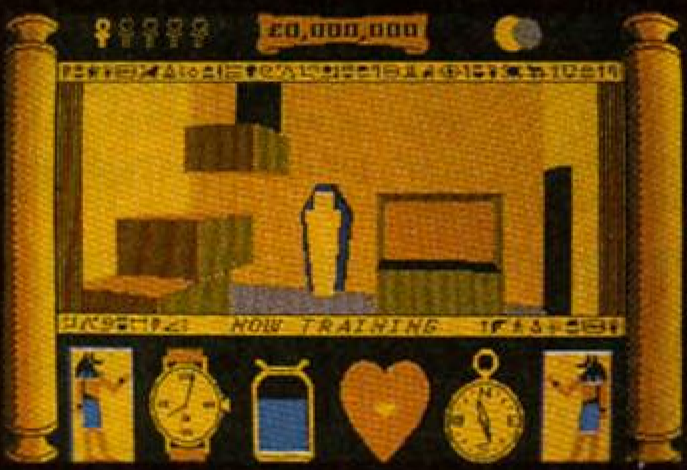
91%



HARD DRIVIN'

Probably the most realistic drivie ever. The screen shows the view through your windscreen and everything moves a lot faster than in the *Freescape* games. There are a host of nasty obstacles, from bridges to loops to banks, and other vehicles. The car handles like a real one and the challenge is a biggie. Not the best of racers, but certainly the most realistic.

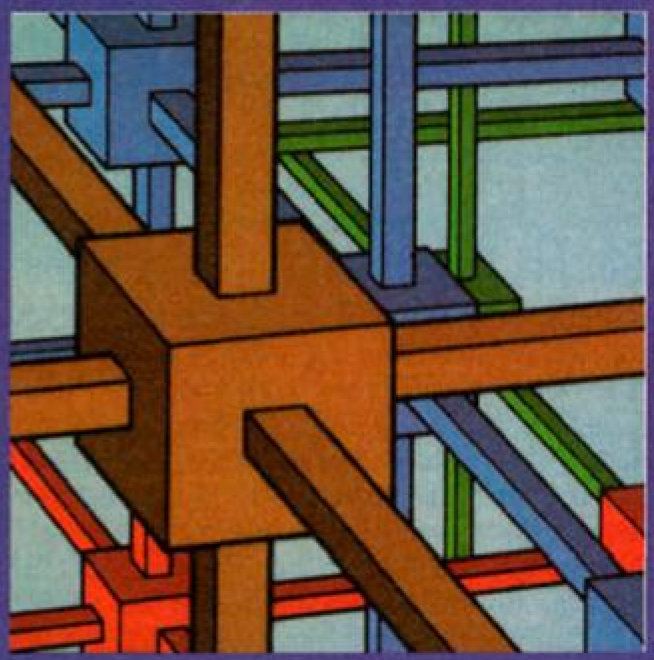
80%



TOTAL ECLIPSE

For the third *Freescape* game, the setting moved from the future to the past: Egypt in the year 1930, in fact. *Total Eclipse* features a mass of different puzzles, and two of hours of real time in which the complete the mission (reaching the shrine at the top of the pyramid), with 50 different locations to wander through. [Mini-game *Total Eclipse 2* was on the *AA78* covertape.]

90%



BORN FREESCAPE

It's the biggest revolution in home computing 3D. It's the programming language that has become synonymous with filled-box virtual words. It's called *Freescape*, and it was developed in 1987 by a company called Incentive Software.

Freescape has so far been used to produce six games (*Driller, Dark Side, Total Eclipse, Total Eclipse 2, Castle Master* and *The Crypt*) and one serious application (*3D Construction Kit*).

The *3D Construction Kit* package (£25.99, cassette and disk) contains a detailed manual, together with a video tape that illustrates some of techniques that can be used.

The program lets the user design his or her own virtual reality landscapes, constructed out of 3D blocks. These can then be used as the basis of an exploration game (there's a free mini-game included with the package, too) or for more serious 'simulations' of real environments

If you want to get into virtual reality, *3D Construction Kit* is the program for you. It's expensive, but it's in a class of its own. Give Domark a ring on 081-780 2222 to find out where you can get it.

This is just the beginning...

GAME DETAILS

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Hit Squad • £3.99	061-832 6633
Driller	
Hit Squad • £3.99	061-832 6633
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Tau Ceti	
Mastertronic • Delisted	071-727 8070
Total Eclipse	
Hit Squad • £3.99	061-832 6633
Virtual Worlds	
Domark • £14.99/£19.99	081-780 2222

BrunWord

464 ROM Module £59

This is a low cost version of our fabulous ROM Module, specially produced for use on CPC computers with no disc drive. To get down to this price, we've removed the database and the BrunWord Elite fonts but all the word processing features and the fantastic As You Type spelling checker, are there ready for instant use.

Plug on the module, type |BW and half a second later the programme is loaded and ready to use. Then the really exciting bit! The tutor file is stored in the ROM, simply type G TUTOR1 <ENTER> and 2 seconds later it's in the BrunWord editor ready for you to experiment with. The tutor takes a complete novice straight into word processing and even includes some spelling errors to find and correct. And all this without once using the cassette.

The next step is to type in the example letter as instructed in the manual. Do it carefully as the computer will beep at every spelling error..... Save it as a memory file, make some changes, change your mind and call it back in 2 seconds! You only use the cassette when you want to make a permanent record. If you are practising your typing or your spelling, you may go for days without using the cassette......

The 464 BrunWord ROM Module is brilliant for learning to type and learning to spell, even if you don't have a printer. But that's just the beginning, you could go on to write your own full length novel. BrunWord ROM is a must for all serious 464 owners. (ROM module for 464 with disc drive add £15. ROM module for 464 Plus add £10).

Elite ROM Module £125

This is the ultimate addition to a 6128 computer. Word processor, spelling checker, 33,000 word dictionary, relational database and 10 superb 'type setting' fonts programmed into one high capacity ROM. Massive memory, small size and includes our latest innovations, the As You Type spelling checker and our System 2 simplified printer control.

The Elite ROM Module is supplied with an 8 bit Printer Status Port which enables the 'type setting' fonts to be used. It has many extra features including page layout commands and high quality high speed screen dump routines for 9 pin and 24 pin printers.

System 2 Printing

Our System 2 control, in the BrunWord Elite ROM module, makes micro justified printing very easy to use. Request auto-formatting and System 2 will take your screen layout, adjust it for the font that you are using and even allow for different printer margins. Roughly on the right, then it will be *on the right.* Roughly in the middle, then it will be *in the middle.* For straightforward pages, no layout instructions are required even when using proportional fonts. It's all controlled from simple instructions in the print menu, which are, of course, saved with the file.

6128 ROM Module £79

BrunWord 6128, BrunSpell, 33,000 word dictionary and Info-Script (powerful relational database) have all been programmed into one huge ROM along with our very latest innovation, the 'As You Type' spelling checker. The ROM is wired into a special printed circuit board and the whole unit coated in protective resin. It is very compact and plugs directly onto the expansion socket of the CPC6128 or 6128 Plus.

Plug on the module, switch on the computer, type |BW and the whole system is immediately ready for use. Type into the word processor, if the computer beeps, press <f3> and ask for help, transfer the correct spelling and resume typing. Use the database to print labels, search for an address, transfer it to the word processor and print it out, all without a single disc operation to slow you down, (except to load and save your own data).

Very Serious

The Elite and 6128 ROM Modules are perfect for an unexpanded CPC6128 or 6128 Plus. You need no other add ons. However, anyone who has two disc drives knows the frustration of inserting a disc, asking to load a file and being told that the other drive has no disc in it. You simply forgot to tell the computer to change drives. That's now a thing of the past. The BrunWord ROM always assumes that the drive with the disc in it is the one you want to use. It's so simple, yet saves such a lot of frustration! If you have a 3.5 inch second disc drive then you can have KDS ROMDOS included in your ROM for £6 extra.

Any Printer ?

All ROM versions work with any Epson compatible printer. All 24 pin printers can make full use of System 2. Older designs of 9 pin printers (Amstrad DMP2160 etc) are limited to whole space justification but modern 9 pin printers (Star LC10 etc) can use micro justification, even with proportional printing.

Epson 24 Pin

Every dot of ink on this page, including the drawing, the large 'BrunWord', our name & address, credit card symbols and Teddy, was printed in one operation using the BrunWord Elite ROM module and an Epson LQ1070 printer (wide carriage LQ570).

ROM Box ?

Remember... Our ROM Modules plug directly onto the computer. *No ROM box is needed.*

BrunWord 6128 £30

BrunWord 6128 on disc is not quite so convenient as the ROM version and doesn't have our very latest additions, but at £30 it represents excellent value. Supplied complete with BrunSpell and 30,000 word dictionary, type RUN"BRUNWORD" to load both programmes and the dictionary. A very fast screen response, extensive editor commands and the 4000 words per minute spelling checker, make it a joy to use. On the disc is a tutor file which takes even a complete beginner straight into word processing and demonstrates the powerful editing and formatting features of BrunWord. The 40 page manual includes step by step instructions to produce and print a simple letter.

Font Editor £20

The Font Editor enables the BrunWord Elite fonts to be edited and saved to disc. It can handle fonts up to 32 dots high, so very high quality fonts can be created and used in the 'Headline' mode, on most 9 pin and all 24 pin printers. 'Headline' is a standard feature of the BrunWord Elite ROM module. Smaller fonts 24 dots high or less can be downloaded to 24 pin printers or used in the 'Headline' mode. The Font Editor also has size change routines and the ability to import hand drawn characters (using a Dart Scanner).



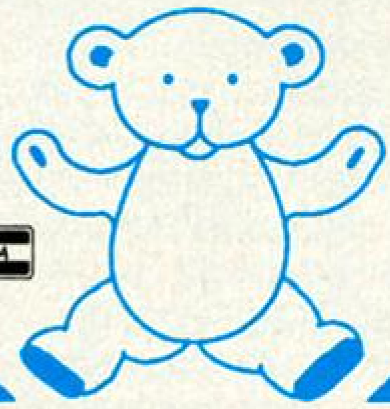
'The Gurr Girl'

She knows how to cure bad spelling! (Drawing by Chris Rothero).

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When a man loves a woman	Michael Bolton	☐
Bohemian Rhapsody	Queen	☐
Let's get rocked	Def Leppard	☐
We got a love thang	Ce Ce Peniston	☐
Feel so high	Des'ree	☐
Don't let the sun go down on me	George Michael & Elton John	☐
Viva Las Vegas	ZZ Top	☐
It must be love	Madness	☐
Now that we found love	Heavy D & the Boyz	☐
Weather with you	Crowded House	☐

Title	Artist	Tick Box
Hang in there Baby	Curiosity	☐
Pride (in the name of love)	Clivilles & Cole	☐
High	Cure	☐
Always the last to know	Del Amitri	☐
Change	Lisa Stansfield	☐
My Girl	The Temptations	☐
Goodnight Girl	Wet Wet Wet	☐
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Save the best for last	Vanessa Williams	☐
Remember the time	Michael Jackson	☐
Hold on my heart	Genesis	☐
Days of Pearly Spencer	Marc Almond	☐
(I want to be) Elected	Mr Bean & Smear Campaign	☐
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the Balrog

The ugliest and meanest of all adventure columnists (*Grrr! – The Balrog*) continues with his monthly exploration in the world of adventures... and this month comes up with a whole barrage of clues! Don't forget – send all your adventuring mail to: The Balrog, Amstrad Action, Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2BW

GAC Programming Clinic



If you have any questions on the use of GAC, specific GAC-related problems and queries or hints and tips of your own then jot them down and send them to the Balg's GAC Programming Clinic at the usual *AA* address. So, on with the questions!

Q: Is it possible to get rid of an object – e.g. a man will sell you a ring for some money so you lose the money.
Nick Hughes, Barnstaple

A: *Yep! Just use the x TO n command where x is the object number and n is the room number (room 0 will destroy the object).*

Q: On some lines of code you put the line WAIT. What does it mean and when do you have to use it?
Nick Hughes, Barnstaple

A: *Whenever you press the carriage return in GAC it increments the turn counter (126 and 127) by one. However, some actions such as SAVE and INVENTORY shouldn't take a turn so the WAIT command is used – this stops the turn counter incrementing by one by WAITING for a new command.*

Q: How do you score points?
Nick Hughes, Barnstaple

A: Counter 0 is used to score points – thus you can use the INCR 0 and DECR 0 command to increase and decrease the score. You could increase scores when a player completes a puzzle and decrease it if a player does something wrong (However make sure that you don't allow the player to keep increasing his score by typing the same thing over and over again... ie. if you increase the players score when they open a door, make sure that if they type open door again their score doesn't go up again!)

Q: In my adventure, I want the text to be white and the page and border black. I have written a BASIC loader that changes the screen colours, but as soon as the adventure has loaded the colours return to the default yellow on blue.
David Georgiades, Kent

A: *Simple! Use the control code method described last issue to change the colours in the first displayed message or draw an introductory graphic (such as a pretty 'Welcome to Game X') and change the background and foreground colours using the Ink command.*

Q: How do you get a player to start off with something in his inventory? I have tried desperately to do this, but all in vain.
Keith O'Conor, Dublin

A: *I'm really not too sure about this one as I haven't actually tested it out myself – but I think you type 'with' when asked 'Starts in Room' in the objects sub-menu.*

Lord and Ladies of adventure

Eight more loyal Lords offer their services to adventurers everywhere. So, if you have a problem in an adventure then just jot it down and send it along with an SSAE to the Lord's/Lady's address.

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Forest at World's End • Hitchhiker's Guide • Jewels of Babylon • Leather Goddesses • Message from Andromeda
Iain McCarthy, The Old School, Church Lane, Brantham, Manningtree, Essex CO11 1QA

Balrog's Cluepot

Thanks this month go to the following brave adventurers who have once again risked their electronic lives to bring these snippets of clues: Simon Avery (Chudleigh), Brendan "Legolas" McGoldrick (Strabane), Fred Collins & Rob Low (Party on!), Daniel Pooley, Jay Honosutomo (Hemel Hempstead), Lee Hatton (Northern Ireland) and Robert Melody (Surrey). Special thanks to Thomas Christie from Grangemouth for his hints and his map of S.M.A.S.H.E.D.



Black Fountain – Part 1

- To survive the cold, give Shepos the lamb then wear what he gives you.
- Give Brusto the herbs and some money to get the Chati (strength potion).
- To get past the rockfall in the mine, drink Chati and then push rockfall.
- Clean the Chef's dishes.
- Hug the bear to get to Part Two.

Escape from Khoshima (Daniel Pooley)

- Give the cigarettes to the soldier.
- Throw meat to the dogs.
- Fill the lighter at the aircraft dripping oil.
- Cover the wood with pitch, light the wood and walk through the waterfall.
- Trap the snake with the stick.
- Sleep in the cave before drinking at the pool.

How to be a Complete B••••••

- Give someone a haircut with the shears (be drunk)
- Play the piano if anybody is in the room.
- Pour paint over someone's head (be sober).
- Pour oil over someone's head (be sober).
- Drop the doggydo in any room if it's crowded.
- Eat the laxative.

Lords of Time

- Zone 9: Go to the plant roots (make sure you have bottle of poison), drop bottle, east twice to the end of tunnel, up three times and wear cloak.

Message from Andromeda

- The password for the computer can be found in the 'Old' cave.

Price of Magik

- Give the stone golem the robes to get mail.
- To get past the gargoyle, "Gargoyle, fear", northwest (Mylar is here).

Simply Magic

- Play lute in room of the elf.
- In the room of riddles the code to the gold caskett is PEG and to the bronze caskett ROPE.
- To get the feather put the peg on your nose.

Spiro Legacy

- To get Fido spell, get net curtain from housekeeper room and wear it.
- Then go and examine beehive…
- To get to the island, use the bung from the barrel to stop the leak in the boat. Then cast the Bonzo spell on yourself and push the boat. Row boat south to get to the island.

Scapeghost – Part 2

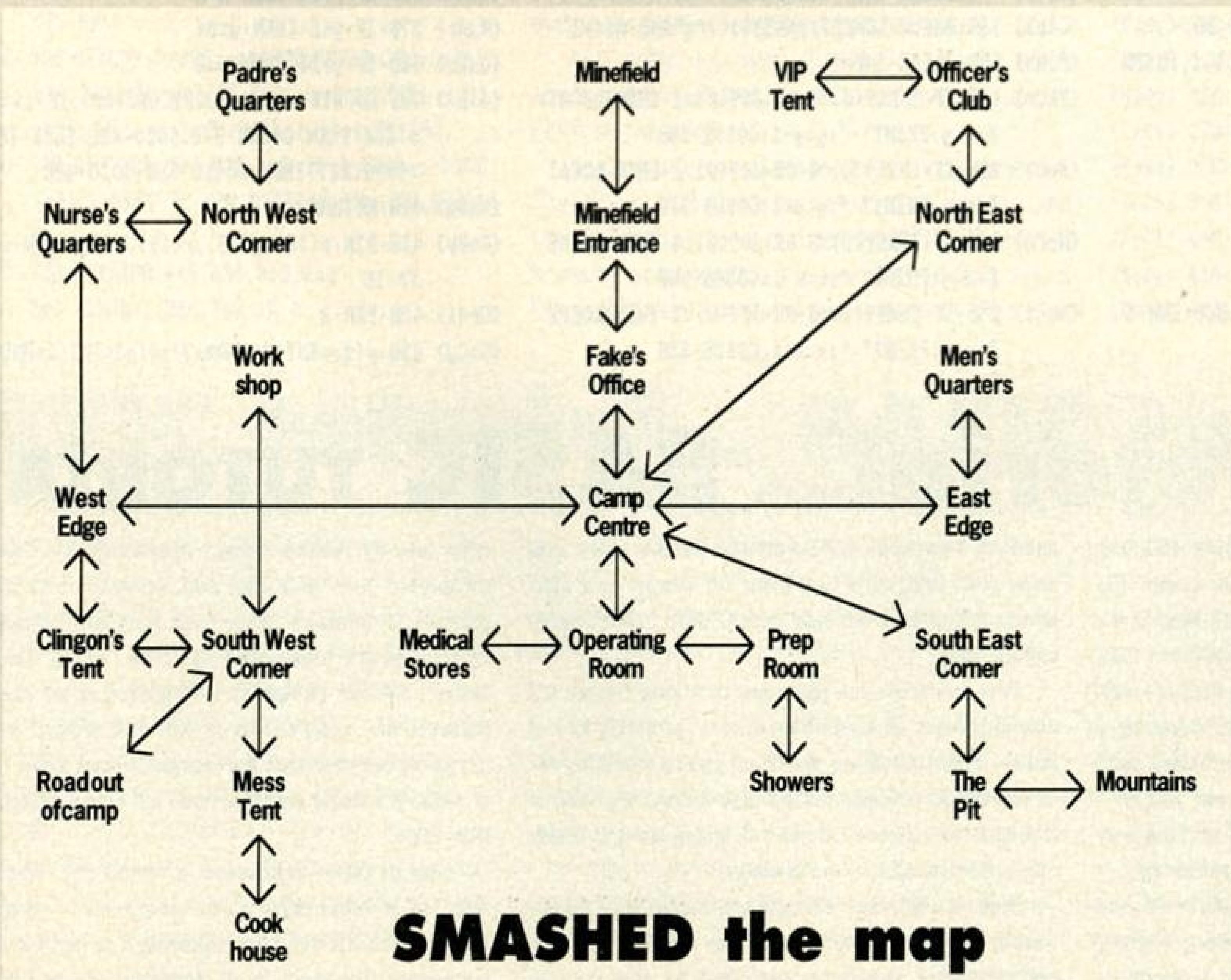
- The objects to put in the hall in Part Two are Luke's body, the bookmark, the briefcase, the identification card, the envelope, the map and the charred paper.
- For clues at any time concentrate in different locations.

Terrormolinos

- At the vineyard, go into the tunnels and find the room with the spider. Beryl will see it and create a scene so load the flash on to the camera and take photo to return to coach.

Very Big Cave Adventure

- Open the can to kill the python.
- Throw bomb to kill bull.
- Open gas canister to stop Jester.
- In Part Two in the horror section, go west three times and wait. You will then be in an Alice in Wonderland section. W, examine table until you get all the objects, wear glove, dial file (on utility belt), file chain, get table, drink liquid, find and open door, north three times, examine and get rabbit (several times). You can now really start Part Two.



SMASHED the map

Contacting the Balg

To get in touch with the Balg, write to him at: Amstrad Action, Future Publishing Ltd, Beauford Court, 30 Monmouth Street, Bath, AVON BA1 2AP or e-mail at cazsjw@uk.ac.leeds.dcs. News

type-ins

Grr! Something horrible happened to *Type-Ins* last time, and the previous issue's section was reprinted. Heads will roll! Meanwhile, send those progs to: Type-Ins, Amstrad Action, Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2BW

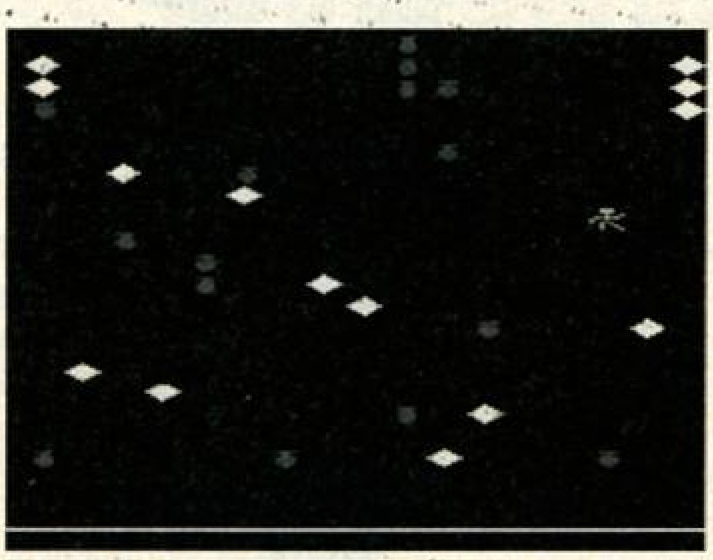
DIHUNT (6128 ONLY)

WINNER! £20

Ever had the sinking feeling when you've picked up a game only to find that it's aimed at 'younger players'? Usually, 'younger players' translates almost exactly as 'crap game'. Not, however, in the case of *Dihunt*.

A kind of *Dig-Dug* without the frills, *Dihunt* nonetheless manages to cram some pretty good effects such as a dissolving high score table and fast character animation into its paltry 4K of space.

Well done, Shaun Walton of Fulford, York. You're twenty pounds the richer!



■ **With 15 difficulty levels you can make collecting diamonds as hard as you like.**

```
{MpAv} 10·REM·****·Diamond·Hunt·****
{BtBi} 20·REM·****·Shaun·Walton·1992·****
{NlAq} 30·ON·BREAK·GOSUB·320
{DrAr} 40·DIM·H(5),H$(5)
{OkBo} 50·FOR·i=1·TO·5:H$(i)="Fred":H(i)=(6-
       i)*25:NEXT·i
{AoAx} 60·x=2:y=2:a=1:L1=3:T1=36:A1=0
{MxDn} 70·ENT·1,10,-50,1,10,50,1:ENT·2,10,-
       50,10,10,50,10:ENV·1,15,-1,10,15,1,10:EN
       V·2,4,2,5,4,-2,5,4,2,5,4,-2,5
{CkBr} 80·MODE·1:INPUT"Which·Level·(1·-
       ·Hard,15·-·Easy)";L0
{CiAx} 90·IF·L0<1·OR·L0>15·THEN·80
{JnAs} 100·T1=T1+INT(1+L0/5)
{MxAl} 110·MODE·0
{DvCi} 120·SPEED·INK·1,1:BORDER·0:INK·0,0:INK·1
       ,26:INK·2,6:INK·3,24:INK·5,5
{BxAl} 130·FRAME
{PwCi} 140·MOVE·12,4:DRAW·12,395:DRAW·627,395:D
       RAW·627,4:DRAW·12,4
{FmAm} 150·GOSUB·410
{MpBk} 160·AFTER·350*INT(2+L0/5),2·GOSUB·740
{OiBj} 170·AFTER·500*INT(2+L0/5),3·GOSUB·760
{DjAu} 180·EVERY·50,1·GOSUB·790
{GsBk} 190·WHILE·LOWER$(INKEY$)<>"q"AND·A1<>1
{PiAo} 200·CLEAR·INPUT
{PkCm} 210·IF·INKEY(0)=0·OR·JOY(0)=1·THEN·LOCAT
       E·x,y:PRINT"·":y=y-1:GOSUB·350
{HoCl} 220·IF·INKEY(2)=0·OR·JOY(0)=2·THEN·LOCAT
       E·x,y:PRINT"·":y=y+1:GOSUB·350
{MsCn} 230·IF·INKEY(8)=0·OR·JOY(0)=4·THEN·LOCAT
       E·x,y:PRINT"·":x=x-1:GOSUB·350
{NqCl} 240·IF·INKEY(1)=0·OR·JOY(0)=8·THEN·LOCAT
       E·x,y:PRINT"·":x=x+1:GOSUB·350
{KsAx} 250·IF·b=0·THEN·b=1·ELSE·b=0
{AjBk} 260·LOCATE·x,y:PEN·a:PRINT·CHR$(250+b);
{HrAs} 270·FOR·e=1·TO·L0*4:NEXT·e
{BnAw} 280·a=RND*15:IF·a=0·THEN·a=1
{BoAk} 290·WEND
{OsEi} 300·IF·A1=1·THEN·320·ELSE·F=REMAIN(1):F=
       REMAIN(2):F=REMAIN(3):FOR·l=1·TO·15:PEN·
       l:LOCATE·3,5:PRINT"You·scored·";S0*L1;"!
       ":NEXT·l
{HqAs} 310·T0=S0*L1:GOSUB·870
{DoFp} 320·MODE·1:INK·0,0:INK·1,26:PEN·2:LOCATE
       ·14,1:PRINT"HIGH·SCORES":PEN·1:FOR·i=1·T
       O·5:LOCATE·2,(i+1)*2:PRINT·i;"·";H$(i),H
       (i):NEXT·i:PRINT:PRINT:PEN·3:INPUT"Anoth
       er·go·(Y/N)";G$:PEN·1
{DqCw} 330·IF·LOWER$(LEFT$(G$,1))="y"THEN·ERASE
       ·p,q,r,s:GOTO·60·ELSE·IF·LOWER$(LEFT$(G$
       ,1))<>"n"THEN·320
{GrAs} 340·GOSUB·900:MODE·2:END
{JrAu} 350·IF·x<2·THEN·x=19
{CtAt} 360·IF·x>19·THEN·x=2
{MjAr} 370·IF·y<2·THEN·y=24
{GjAr} 380·IF·y>24·THEN·y=2
{JiDl} 390·LOCATE·x,y:c$=COPYCHR$(#0):IF·c$=CHR
       $(252)THEN·GOSUB·570:GOTO·400·ELSE·IF·c$
       =CHR$(227)THEN·GOSUB·590:GOTO·400
{HuAn} 400·RETURN
{OuBp} 410·DIM·p(15),q(15),r(15),s(15):FOR·z=1·
       TO·15
{CrAl} 420·PEN·2
{GsCj} 430·p(z)=INT(2+RND*17):q(z)=INT(2+RND*22
```

BASIC tutorial... BASIC TUTORIAL...

Did you mess around with the string counting loops from last month? See how much easier the whole process is when it's automated? And that's what computers are all about. You'll soon learn that, as a novice programmer, almost any line of code you write can be rewritten by an old hand in a tighter and therefore faster and more efficient way. But don't worry, and don't let that fact put you off – even the old hands started somewhere, and the only way to learn the tricks is to do the programming...

At the close of play last time, I said we'd add some error-checking routines to our string counter in order to trap all those mistakes that subsequent users of your code will somehow stumble upon and enter. But first, let's just clear up one or two little things left over from last month that I didn't quite explain fully.

Why shouldn't you jump out of a loop before it's finished? After all, there'll be times – probably lots of times – when whatever condition you're checking for or hoping to achieve will be met before the loop is finished, and there's no point in going around it any more. So just what is the problem?

Well, it's like this. Computers, as I'm sure you're aware, are simple machines. They appear complex and intelligent, simply because they do what they do very quickly (you're always impressed by Chinese three-year olds who can add, subtract and divide millions of numbers faster than a pocket calculator, right? Doesn't mean they're more intelligent, just faster). OK, so computer intelligence is an illusion. Beneath the surface, lots of different processes are going on in order that the computer can keep track of what it's doing and not lose its place among all that code.

One of those processes is called the 'stack'. It acts as a reminder for the computer, listing the things which it's done and allowing it to back-track if necessary. The stack is an electronic pile or heap of

```
       ):IF·p(z)=2·AND·q(z)=2·THEN·430
{LsBi} 440·FOR·w=1·TO·15:IF·w=z·THEN·460
{BvBl} 450·IF·p(z)=r(w)AND·q(z)=s(w)THEN·430
{NoAl} 460·NEXT·w
{PrBj} 470·LOCATE·p(z),q(z):PRINT·CHR$(252);
{KqAl} 480·PEN·3
{KoCp} 490·r(z)=INT(2+RND*17):s(z)=INT(2+RND*22
       ):IF·r(z)=2·AND·s(z)=2·THEN·490
{DoAx} 500·FOR·w=1·TO·15:IF·w=z·THEN·520
{AnBk} 510·IF·r(w)=r(z)AND·s(w)=s(z)THEN·490
{NnAl} 520·NEXT·w
{DjBl} 530·LOCATE·r(z),s(z):PRINT·CHR$(227);
{GmAm} 540·NEXT·z
{BvAm} 550·PEN·1
{LjAn} 560·RETURN
{JjGl} 570·L1=L1-
       1:GOSUB·700:GOSUB·620:IF·L1=0·THEN·F=REM
       AIN(1):F=REMAIN(2):F=REMAIN(3):FOR·l=1·T
       O·15:LOCATE·5,5:PEN·1:PRINT"DEAD!":LOCAT
       E·3,6:PRINT"You·scored·";S0+T1;"!":NEXT·
       l:T0=S0+T1:GOSUB·870:GOTO·320
{FvAn} 580·RETURN
{GvHj} 590·S0=S0+1:SOUND·1,500,10,10,,1:IF·S0=1
       5·THEN·F=REMAIN(1):F=REMAIN(2):F=REMAIN(
       3):SOUND·1,350,250,10,1,2:FOR·l=1·TO·15:
       LOCATE·5,5:PEN·1:PRINT"WELL·DONE!":LOCAT
       E·3,6:PRINT"You·scored·";(S0+T1)*L1;"!":
       NEXT·l:GOTO·600·ELSE·610
{KnAx} 600·T0=(S0+T1)*L1:GOSUB·870:GOTO·320
{GnAn} 610·RETURN
{MjBm} 620·REM·***·Screen·Clear·Routine·by·????
       ·***
{DjBi} 630·OUT·&BC00,1:FOR·q=40·TO·1·STEP-1
{AxAu} 640·FOR·t=1·TO·10:NEXT·t
{JxAs} 650·OUT·&BD00,q:NEXT·q
{LnAu} 660·OUT·&BC00,1:FOR·q=1·TO·40
{KmAu} 670·FOR·t=1·TO·10:NEXT·t
{DmAs} 680·OUT·&BD00,q:NEXT·q
{JvAm} 690·RETURN
{JtBo} 700·REM·***·Explosion·Sound·Routine·by·?
       ???·***
{GtDp} 710·MEMORY·39999:c=40000:GOSUB·720:CALL·
       c,6,30:CALL·c,7,39:CALL·c,8,16:CALL·c,11
       ,255:CALL·c,12,30:CALL·c,13,1:RETURN
{GjCn} 720·RESTORE·720:FOR·i=0·TO·9:READ·v:POKE
       ·c+i,v:NEXT:RETURN:DATA&dd,&7e,&02,&dd,&
       4e
{JuAt} 730·DATA&00,&cd,&34,&bd,&c9
{MsAu} 740·SOUND·1,200,100,10,2
{KpAn} 750·RETURN
{KnBm} 760·SOUND·1,200,100,15,2,1:F=REMAIN(3)
{KoDw} 770·F=REMAIN(1):F=REMAIN(2):FOR·l=1·TO·1
       5:LOCATE·5,5:PEN·1:PRINT"OUT·OF·TIME!":L
       OCATE·3,6:PRINT"You·scored·";S0*L1;"!":N
       EXT·l
{JsAw} 780·T0=S0*L1:GOSUB·870:A1=1:RETURN
{KmAq} 790·T1=T1-1:RETURN
{BxFo} 800·MODE·1:INK·0,0:INK·1,26:PEN·1:FOR·i=
       1·TO·10:FOR·j=1·TO·3:LOCATE·2,5:PEN·j:PR
       INT"NEW·HIGH·SCORE!!":NEXT·j,i:PRINT:PRI
       NT:PEN·1:INPUT"Enter·your·name(max·7·let
       ters)";N$
{EpAw} 810·IF·LEN(N$)>8·THEN·800
{NsAq} 820·FOR·i=4·TO·D·STEP-1
{EnAu} 830·H$(i+1)=H$(i):H(i+1)=H(i)
{JkAl} 840·NEXT·i
{MlAr} 850·H$(D)=N$:H(D)=T0
{LoAm} 860·RETURN
{PsBt} 870·FOR·i=1·TO·5:IF·T0>H(i)THEN·D=i:GOSU
       B·800:GOTO·880·ELSE·NEXT·i
{MrAo} 880·T0=0:S0=0
{HjAn} 890·RETURN
{FoBj} 900·REM·***·Fade·Routine·by·????·***
{OmAo} 910·MEMORY·40199
{EpBx} 920·FOR·A0=40200·TO·40217:READ·V0$:POKE·
       A0,VAL("&"+V0$):NEXT·A0
{CuAp} 930·CALL·40200
{NrAn} 940·RETURN
{HnAr} 950·DATA·1e,fe,21,00,c0
{JuAr} 960·DATA·7b,a6,77,23,7d
{JnAs} 970·DATA·b4,20,f8,cb,13
{MoAp} 980·DATA·38,f1,c9
```

SUPERSNAKE

WINNER! £20

We've seen a few 'snake'-style games in *Type-Ins* before, but none as good as this! The author is David Hall of Manchester, and he explains that his high-score is 150, and reckons that readers have "no chance" of beating it!

You could be right, David! *Supersnake* looks absolutely terrific and moves at a heck of a speed. But first, the rules...

You control your green snake using the joystick. The idea is to eat the berries as they appear, and you do this by running over them. At the same time, however, you have to stop your snake hitting any of the walls, and from going back on itself. This isn't easy, because the snake is moving all the time and you have to concentrate just as much on avoiding the obstacles as collecting the berries.

Supersnake is simple, but infuriatingly addictive. And a high-score of 150? It can't be done, surely...?

```
{IjAv} 10·'·SUPERSNAKE·····(c)·December·1990
{FvAo} 20·'·by·David·Hall
{BsAj} 30·'
{KvBi} 40·'·*·Set·Colours,Code·&·Graphics·*
{GwAo} 50·MEMORY·9999
{PoAk} 60·INK·0,0
{DrAm} 70·INK·13,15
{FmAl} 80·INK·5,3
{GnAm} 90·BORDER·0
{DvAl} 100·MODE·0
{NnAm} 110·PAPER·0
{LtAl} 120·CLS
{BsAr} 130·DIM·a(20,23)
{MlAk} 140·hi=150
{PxAl} 150·PEN·15
{OvAs} 160·PRINT·"SUPERSNAKE"
{LiBn} 170·PRINT·"(c)·David·Hall·1990·Joystick·
       ONLY"
{BnAn} 180·store=10000
{HpAt} 190·FOR·loop1=1·TO·18
{FmAm} 200·sum=0
{CkAs} 210·READ·code$,total
{PwAu} 220·FOR·loop2=1·TO·24·STEP·2
{GrBl} 230·value=VAL("&"+MID$(code$,loop2,2))
{JjAr} 240·POKE·store,value
{GvAr} 250·sum=sum+value
{HxAo} 260·store=store+1
{AjAp} 270·NEXT·loop2
{IvAv} 280·IF·sum=total·THEN·310
{OqAx} 290·PRINT·"Error:·line";1370+loop1*10
{NiAk} 300·END
{CiAq} 310·NEXT·loop1
{HkAv} 320·'·*·Set·up·Screen·Array·*
{NnAk} 330·CLS
{FjAq} 340·FOR·loopa=1·TO·23
{MpAt} 350·FOR·loopb=1·TO·20
{NsAq} 360·a(loopb,loopa)=1
{LvAt} 370·CALL·10000,1,loopb,loopa
{MvAq} 380·NEXT·loopb,loopa
{IvAt} 390·FOR·loopa=2·TO·22
{DvAt} 400·FOR·loopb=2·TO·19
{KqAp} 410·a(loopb,loopa)=3
{KqAq} 420·NEXT·loopb,loopa
```

→

BASIC tutorial... BASIC tutorial...

items constructed on a last-in-first-out basis. That is, the last number put onto the pile ('Pushed' in computer terms) will be the first thing taken off the pile ('Popped') which just about makes sense when you think about it. In reality, the stack is a protected area of memory featuring a series of memory cells.

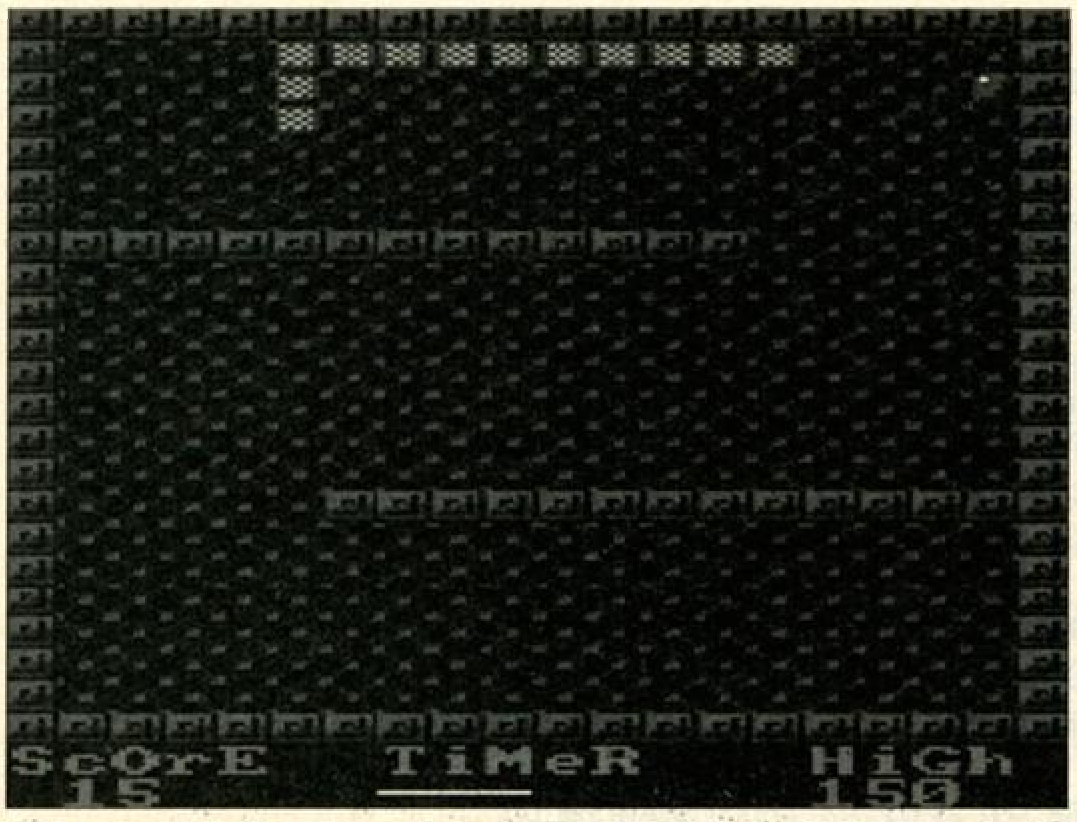
Right. Now you know by now that computers don't think in BASIC. That language is simply to make things easier for you. Once inside the computer, BASIC is converted into code the computer can deal with directly – a complex process (the PRINT statement for example, takes over 40 lines of machine code to achieve the same effect). When the computer is instructed to perform a loop it has to have some method of remembering where it was, what the loop counter value is, where it must go, and so on. By storing some of this information on the stack, the machine can find its way around easily and efficiently.

So. There's the CPC, sitting tight with its stack nicely ordered and all ready to zip backwards and forwards doing your bidding, when suddenly, you force your way out of a loop and the stack structure is no longer valid – you've literally 'blown your stack'! The computer crashes (actually, it doesn't in Siliconville...) and you're left wondering what on Earth has happened.

Now remember those putting on and taking off commands? Push and Pop? Some BASICs give you access to the Pop command so that you can – simply put – take a few steps off the stack, jump out of the loop, and leave the computer in a fit state of mind. It's still bad practice, but you can at least do it.

CPC BASIC however, does not.

The moral is then, don't use a FOR ... NEXT loop if you want to quit its operation early (more about alternatives later in the series).



■ Arrrggghh! The more berries it eats the longer your snake becomes. You have to avoid eating yourself by mistake...



■ ...and not collide with the walls! Yes, thank you for that screen message, we had worked it out. That hi-score looks safe.

```
{DkAs} 430·FOR·loop=2·TO·14
{PwAo} 440·a(loop,8)=1
{OrAs} 450·a(21-loop,16)=1
{FsAo} 460·NEXT·loop
{IpAo} 470·a(12,11)=4
{IoAt} 480·IF·sc>hi·THEN·hi=sc
{PxAq} 490·FOR·loopa=1·TO·23
{GnAs} 500·FOR·loopb=1·TO·20
{PmBi} 510·CALL·10000,a(loopb,loopa),loopb,loop
       a
{DtAr} 520·NEXT·loopb,loopa
{JiBk} 530·'·*·Set·Variables·/·Draw·Screen·*
{LsAl} 540·fl=1
{MmAl} 550·px=12
{CtAm} 560·py=11
{MoAk} 570·dx=1
{IuAl} 580·dy=0
{EsAl} 590·c=px
{ImAl} 600·d=py
{MqAm} 610·b$="r"
{PpAm} 620·a$="aa"
{CrAm} 630·part=2
{OsAl} 640·sc=0
{BrAn} 650·PEN·13
{AmAp} 660·LOCATE·1,24
{DqAs} 670·PRINT·"ScOrE··········HiGh"
{AsAm} 680·PEN·11
{FuAn} 690·LOCATE·8,24
{NoAo} 700·PRINT·"TiMeR"
{ExAm} 710·PEN·7
{BmAp} 720·LOCATE·15,25
{JpAm} 730·PRINT·hi;
{HpAl} 740·PEN·7
{IoAq} 750·LOCATE·1,25
{OxAm} 760·PRINT·sc
{GtBi} 770·'·*·Check·if·Fruit·has·been·eaten·*
{KnAr} 780·IF·fl<>1·THEN·890
{BkAo} 790·x=RND*20
{HmAo} 800·y=RND*23
{FrAx} 810·IF·a(x,y)<>3·THEN·740
{EvAo} 820·a(x,y)=2
{FoAq} 830·CALL·10000,2,x,y
{LpAl} 840·fl=0
{MnAn} 850·PLOT·224,8,1
{EwAo} 860·DRAWR·160,0
{HtAl} 870·ti=388
{GuBj} 880·'·*·Move·Snake·&·Collision·Check·*
{NrBn} 890·IF·INKEY(72)=0·THEN·dx=0:dy=-
       1:b$="u"
{FmBn} 900·IF·INKEY(73)=0·THEN·dx=0:dy=1:b$="d"
{DqBm} 910·IF·INKEY(74)=0·THEN·dx=-
       1:dy=0:b$="l"
{GtBm} 920·IF·INKEY(75)=0·THEN·dx=1:dy=0:b$="r"
{KpAo} 930·px=px+dx
{EmAn} 940·py=py+dy
{GmAs} 950·CALL·10000,4,px,py
{KpBs} 960·IF·a(px,py)=1·THEN·a$="·YOU·HIT·A·WA
       LL·!":GOTO·1220
{DtBu} 970·IF·a(px,py)=4·THEN·a$="·YOU·ATE·YOUR
       SELF!":GOTO·1220
{HjAx} 980·IF·a(px,py)<>2·THEN·1050
{IpAp} 990·SOUND·1,300
{AnAq} 1000·SOUND·1,150
{FxAl} 1010·fl=1
{LpAn} 1020·sc=sc+5
{PlBi} 1030·IF·part<68·THEN·part=part+3
{JjBi} 1040·IF·part<68·THEN·a$="aaa"+a$
{MsAq} 1050·SOUND·1,2000,1
{FwAo} 1060·a(px,py)=4
{GvAn} 1070·ti=ti-1
{LnAo} 1080·PLOT·ti,8,0
{IjBn} 1090·IF·ti=224·THEN·a$="--
       ·OUT·OF·TIME!·--"
{DjAx} 1100·IF·ti=224·THEN·GOTO·1220
{KpAn} 1110·a$=b$+a$
{ApAr} 1120·f$=RIGHT$(a$,1)
{PkAw} 1130·IF·f$="u"·THEN·d=d-1
{EkAv} 1140·IF·f$="d"·THEN·d=d+1
{EiAv} 1150·IF·f$="l"·THEN·c=c-1
{JvAv} 1160·IF·f$="r"·THEN·c=c+1
{DkAr} 1170·CALL·10000,3,c,d
{ItAn} 1180·a(c,d)=3
{KqAq} 1190·a$=LEFT$(a$,part)
{AsAn} 1200·GOTO·740
{PpAq} 1210·'·*·Game·Over·*
{IjAt} 1220·CALL·10000,5,px,py
{OuAq} 1230·FOR·loopa=1·TO·5
```

BASIC tutorial... BASIC TUTORIAL...

OK, so that's cleared up that. Now what about loop counters? Why should we use abbreviated names for them and other variables instead of longer, more obvious names? Surely the latter would be best so that you'd always know what it was being used for?

No. Plain and simple. It's only recently that computers have been equipped with reasonable amounts of RAM memory. And even now, the CPC only has only a small amount of Ks to play around with. Every character you use for a loop counter or any other variable name takes up one byte of valuable RAM. A moderately sized program, littered with large variable and counter names, will soon completely fill the memory.

The solution then, is to use obvious but abbreviated names such as CNT for COUNT. You'll soon learn to recognise the abbreviations, and probably devise 'standard' ones of your own.

And now for those error-checking routines. Here's a reminder of the string counting code.

```
10 REM This is a program to count the charac-
ters in a string
20 FOR CNT=1 to 5
30 A$=""
40 INPUT "Please type a string"' A$
50 PRINT "The string '"A$"' is "LEN (A$)
"characters long."
60 NEXT CNT
70 END
```

As it stands, users can enter any old gibberish and the program will still attempt to count whatever's typed in. This may amount to nothing more than, say, a press of the Return key, and it would be useful to trap this and other 'problem' input without going around the loop. Here's the amended lines featuring code to do just that:

```
10 REM This is a program to count the charac-
ters in a string
```

```
{JkAu} 1240·FOR·loopb=1·TO·15
{JmBi} 1250·SOUND·4,0,2,15,0,0,loopb
{FvAs} 1260·NEXT·loopb,loopa
{KoAq} 1270·LOCATE·2,11
{ExAn} 1280·PEN·14
{DoAx} 1290·PRINT·CHR$(22);CHR$(1);a$
{NrAo} 1300·LOCATE·5,22
{LtAm} 1310·PEN·4
{NjAu} 1320·PRINT·"Press·<FIRE>";
{OpAt} 1330·PRINT·CHR$(22);CHR$(0)
{KwBi} 1340·WHILE·INKEY(47)·AND·INKEY(76)
{FlAl} 1350·WEND
{PwAm} 1360·GOTO·330
{FmAx} 1370·'·*·Machine·Code/Sprite·data·*
{LqBi} 1380·DATA·DD4604112000212527191 0FD,747
{AlBo} 1390·DATA·E5DD460221ACBF1E041910FD,1246
{LoBk} 1400·DATA·1E50DD46001910FDD10E08E5,1155
{NkBj} 1410·DATA·06041A77231310FAE13E0884,902
{IlAv} 1420·DATA·670D20EFC90F0F0A0F0F0A,683
{PjBi} 1430·DATA·0A0F000A0A0F0528281E3C28,275
{FpAw} 1440·DATA·28280000283C3C3C28000000,340
{JxAx} 1450·DATA·0088CCCC444464CCA044CCD8,1632
{LxBl} 1460·DATA·A044CCD8A044CCF0A044CCF0,1992
{NpBi} 1470·DATA·A044F0F0A088F0F001880000,1621
{NtAw} 1480·DATA·4450000A000A05000000188,685
{GuAt} 1490·DATA·000044880000A05000500000,524
{HvBi} 1500·DATA·A088000001C9C3C344939393,1397
{MjBi} 1510·DATA·82C363638293939382C36363,1617
{LlBj} 1520·DATA·829393938241C3C3A0880000,1452
{EiBi} 1530·DATA·01880088CC4444E6A2D9D9D1,1648
{JoBi} 1540·DATA·00CCE2D1D951C0C0E644E2F3,2088
{PrBj} 1550·DATA·8851D1C8E6CC440088000000,1264
```

EYE

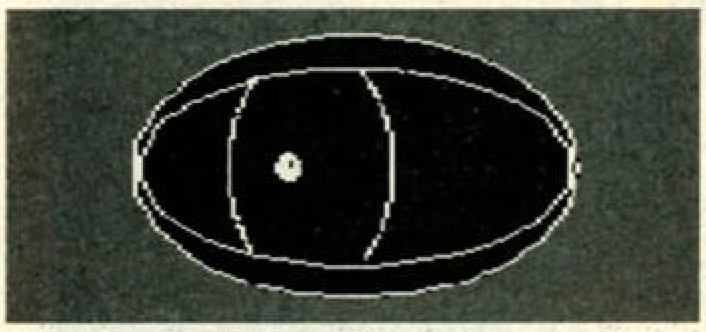
Not overly keen on demos, I'm afraid they appear on these pages with an infrequency matched only by … well, something which isn't very frequent. But when I saw Eye, all that changed.

Written by Sean McManus of Stevenage, Herts, Eye is a colour-swapping and animated graphics demo which is both unusual, technically interesting and well, yes, eye-catching!

What the demo does, is to draw an enormous eye on your CPC's monitor. The eye blinks, swivels from side to side, and generally makes its presence felt.

Beware! Big Brother Amstrad is watching you…

```
{CiBj} 10 ' EYE - COLOUR SWAPPING DEMONSTRATION
{HlAs} 20 ' (C) 6/4/92 SEAN MCMANUS
{AtBj} 30 '
{EtAj} 40 '
{PtBw} 50 ON BREAK GOSUB 350:DEFINT a-z:CALL
       &BC02:MODE 0:INK 0,0:BORDER 10
{MwFi} 60 DEG:PAPER 14:PEN 15:FOR g=1 TO
       500:PRINT CHR$(134);:NEXT:INK 14,13:INK
       15,10:FOR g=1 TO 180:PLOT
       320+200*SIN(G),200+100*COS(G):DRAW
       320+200*SIN(360-G),200+100*COS(360-
       G),0:NEXT
{AoDs} 70 PEN 1:PAPER 0:SYMBOL
       255,48,254,22,60,116,210,254,16:LOCATE
       19,24:PRINT
       CHR$(22)CHR$(1);CHR$(255);CHR$(22)CHR$(0
       );
{LuBt} 80 PLOT 1,1,1:DRAW 639,1:DRAW
       639,399:DRAW 1,399:DRAW 1,1
{IsBs} 90 FOR g=225 TO 320:PLOT
       280+75*SIN(g),200+90*COS(g),6:NEXT
{OoBs} 100 FOR g=35 TO 140:PLOT
       280+75*SIN(g),200+90*COS(g):NEXT
{AxBs} 110 FOR g=220 TO 325:PLOT
       360+75*SIN(g),200+90*COS(g),8:NEXT
{GpBt} 120 FOR g=40 TO 135:PLOT
       360+75*SIN(g),200+90*COS(g):NEXT
{JpCq} 130 READ t:FOR z=1 TO t:READ
       i,r1,r2:PLOT 320-r1,200,i:FOR g=-90 TO
       270 STEP 5
{FuCj} 140 IF g=90 AND i>1 THEN IF i=2 THEN i=5
       ELSE IF i=3 THEN i=4
{KjBn} 150 DRAW
       320+r1*SIN(g),200+r2*COS(g),i:NEXT
{MpBl} 160 NEXT:DATA
       3,1,200,100,2,195,75,3,190,50
{HnBt} 170 i=10:FOR g=220 TO 325 STEP 2:IF
       g=240 OR g=304 THEN i=i+1
{OpBl} 180 PLOT
       320+75*SIN(g),200+90*COS(g),i:NEXT
{MuBn} 190 FOR g=35 TO 140:IF g=58 OR g=120
       THEN i=i-1
{IqBl} 200 PLOT
       320+75*SIN(g),200+90*COS(g),i:NEXT
{FrFi} 210 FOR h=1 TO 3:i=5+h:FOR g=1 TO 180
       STEP 14:PLOT
       200+60*h+10*SIN(g),200+10*COS(g),i:DRAW
       200+60*h+10*SIN(360-g),200+10*COS(360-
       g):NEXT:PLOT 200+60*h,205,0:DRAWR
       2,-2:DRAWR 0,-2:NEXT
{JmCk} 220 FOR g=0 TO 13:INK g,0:NEXT:INK
       1,26:INK 10,26:INK 11,26:INK 12,26
{OvBl} 230 INK 2,26:INK 5,26:GOSUB 270:WHILE 1
{GwBs} 240 FOR g=1 TO RND*2000+1000:NEXT:IF
       RND>0.5 THEN GOSUB 310
{BwBi} 250 a=INT(RND*2)+1:ON a GOSUB
       290,300,270
{PxBt} 260 FOR g=1 TO RND*1500+500:NEXT:INK
       6,0:INK 8,0:GOSUB 270:WEND
{AvBn} 270 INK 10,26:INK 11,26:INK 12,26:INK
       7,26:RETURN
{NuBn} 280 INK 10,0:INK 11,0:INK 12,0:INK
       7,0:RETURN
{IlAv} 290 GOSUB 280:INK 6,26:RETURN
{MlAu} 300 GOSUB 280:INK 8,26:RETURN
{IlCk} 310 FOR g=2 TO 5:INK g,0:INK 14-g,0:INK
       g+1,26:INK 6,0:IF G=3 THEN INK 7,0
{LlBs} 320 FOR H=1 TO 350:NEXT H,G:INK 5,0:FOR
       h=1 TO 350:NEXT
{ArCr} 330 FOR g=5 TO 2 STEP -1:INK g,26:INK
       14-g,26:INK g+1,0:INK 5,26:IF G=3 THEN
       INK 7,26
{LvAx} 340 FOR H=1 TO 350:NEXT H,G:RETURN
{PnBp} 350 MODE 2:PEN 1:PAPER 0:INK 1,26:INK
       0,0:LIST
```



■ It takes a little while to draw itself on-screen, but Sean McManus's *Eye* demo is distinctly spooky. Every get the feeling you're being watched...?

TAKE NOTE!

- Want to know how long a type-in to send in? Well, THE SHORTER THE BETTER! We want to cram as many type-ins into these four pages as possible.
- OK, so you might have a 6128, but OVER HALF OF OUR READERS DON'T. When you write a program for type-ins, you stand a much better chance of getting it accepted if it runs on both the 6128 AND 464.

BASIC tutorial... BASIC tutorial...

```
20 FOR CNT=1 to 5
30 A$=""
40 INPUT "Please type a string"' A$
50 IF A$="" THEN 40
60 IF ASC(A$)<65 OR ASC(A$)>122 THEN PRINT
"Invalid input. Try again\": GOTO 30
70 PRINT "The string '"A$"' is "LEN (A$)
"characters long."
80 NEXT CNT
90 END
```

All we've done is to check that A$ isn't null (i.e. that someone hasn't simply typed Return) and that it's within the ASCII range for upper and lower case alphabetic characters. ASCII is an acronym meaning American Standard Code for Information Interchange, and is a code sequence used to represent letters, numbers, and other characters.

Actually, the given range (ASCII 65 to 122) includes a few non-alpha-numerics such as square brackets, the power and pound signs between ASCII 91 and ASCII 96, but it illustrates the point. We'll use more comprehensive error checking later in the series. Now let's examine the new lines more closely.

Line 50 says, if the ASCII value of A$ is less than 65 (IF ASC(A$)<65) and if it's greater than 122 (ASC(A$)>122) then something's wrong somewhere (65 is upper case A, the first letter in the range, 122 is lower case z the last letter), and we should skip back to line 30, reset A$ and continue as before.

Experiment (why not use the programs on these pages?), have fun, see you next month.

● **So what happened** last month, then? Eagle-eyed readers will have noticed the apparent... er, similarity... between last month's *Type-Ins* and the one before. This was not deliberate! The wrong page 'films' got sent to the printers. Those responsible, meanwhile, are being sent to Siberia...!

Sorry about that, folks.

AD INDEX

Power Up

Treble hurrah! It's AA's new games section, incorporating all your favourite game-like features. Only one big review this month (due to the so-called 'summer lull' in softwaresville) but re-releases and compies a-plenty. Ginger beers all round...



ROD LAWTON

Rod's had a busy month. It all started with the reverse-coupling trunnion spigot linkage in his car. "It was really irritating. I'd got the retro-thrust washer rotated through 90 degrees so that the twist-action clutch driver slid free of the clamp ratchet, and then what do you think happened?" We don't know, Rod, and we don't care. "Well I'll tell you. The alternator feed regulator dropped into the transverse sump manifold." Yes, but what *important* things happened to you this month? "Well, an earthquake flattened the house over the road and left a chasm thirty feet wide outside our front door." Well that's a bit more like it! "I'll say – it shook the alternator feed regulator out of the transverse sump manifold..."



ADAM PETERS

So what's our beloved anarcho-communist raver been up to this month? In true vegetarian fashion, Adam has moved into a flat next to McDonalds. "Eventually I couldn't stand the moral torment any more. I put some tights over my head and staged a raid on their kitchens, breaking in at the dead of night and releasing the captive animals. Despite my shouts of 'shoo!' and 'enjoy your freedom, fellow citizens of earth!', the creatures didn't seem to want to escape their prison. It was only later I learnt they were sausage patties."

Adam Peters is now appearing as Deputy Dawg at the Majestic Theatre, Sidcup.

THE HIT PARADE

ELSPA PENGUIN CHARTS

1 SEYMOUR GOES TO HOLLYWOOD
CodeMasters • 92% (AA81)

2	ROBOCOP • Hit Squad	84% (AA78)
3	BUBBLE BOBBLE • Hit Squad	71% (AA74)
4	MAGICLAND DIZZY • C/Masters	85% (AA64)
5	1ST DIV MANAGER • C/Masters	54% (AA83)
6	QUATTRO SKILLS • C/Masters	78% (AA74)
7	GOLDEN AXE • Tronix	58% (AA75)
8	NEW ZEAL STORY • Hit Squad	76% (AA73)
9	BATMAN – MOVIE • Hit Squad	94% (AA74)
10	ALTERED BEAST • Hit Squad	14% (AA75)
11	MULTIMIXX 1 • Kixx	85% (AA79)
12	LEMMINGS • Psygnosis	97% (AA82)
13	DIZZY PANIC • C/Masters	35% (AA76)
14	AMERICAN TAG • Zeppelin	Not reviewed
15	DRAGON NINJA • Hit Squad	79% (AA79)
16	PRO TENNIS TOUR • Hit Squad	54% (AA84)
17	CHASE HQ • Hit Squad	87% (AA76)
18	RAINBOW ISLANDS • Hit Squad	89% (AA78)
19	DIZZY'S EX ADV • C/Masters	74% (AA76)
20	DIZZY COLL • C/Masters	Not reviewed

REVIEWED THIS MONTH...









Sport for

Some blokes ADAM PETERS knew at school won gold medals at this year's Olympics (in the rowing). Who better then to review the latest crop of CPC sports compilations? The people who won the medals we mean, not Adam.

THE SPORTS COLLECTION

OCEAN • 061-832 6633 £12.99 CASSETTE, £17.99 DISK

Three games – that's the sort of streamlined and recession-friendly '90s compilation size we're used to. *Pro Tennis Tour*, reviewed in this month's *Action Replay*, is an average tennis game. Playable, but not really very inspired.

And then we come to *Run the Gauntlet*, loosely based on the TV programme of that name, which consists of lots of little gamelets strung together Epyx style into a game (of sorts). The go-karting bit is fairly reasonable, but most of the other sections are sadder than a Hollywood weepie. The 'wild man running' part is a particularly traumatic experience, which we have yet to fully recover from.



■ **"Hey ref, I never touched him! He dived, I tell you! And aren't we supposed to pull the opponents over anyway?" Yanks, tsch.**



■ **Introducing our cut-out-and-keep *Pro Tennis Tour* screen shots collection. Here's number one in a series of two: The serve.**

Finally there's *Italia '90*, a football game with brilliant graphics and very good playability. One particularly good feature is the way the screen view switches from overhead mode to goal view mode when someone's bearing down on the target.

The Sports Collection is a bit of a poor package, sadly. If you're only putting three games on a compie, it would be a good idea to make sure at least two of them are decent. *Italia '90* is the only semi-worthy thing here.

compilation

■ Pro Tennis Tour	54%
■ Run the Gauntlet	29%
■ Italia '90	77%

46%

VERDICT



■ **Wouldn't it be funny to print the *Aussie Rules* grab upside down? (*No – ed.*) Oh go on, it'd be hilarious. (*No it wouldn't – ed.*)**

4 MOST BALLS, BOOTS & BRAINS

ALTERNATIVE • 0977 797777 £3.99 CASSETTE

A bit of a round spherical objects feel to this little compilation. There's two games based on the proper application of the ball in modern sport (good, decent, wholesome 'real' football), and two based on more barbaric interpretations.

Soccer Boss was included in our summary of football management games last month. We've gone off it a bit since then, not least due to this opportunity to get to grips with *Rugby Boss*, a more polished version of the same game.

Rugby Boss combines very neat presentation with all the buying and selling, fixture-checking business you normally associate with sport management games. The 'news flashes' that scroll along the bottom of the screen at snail-speed are very annoying, but you can't have everything.

Australian Rules Football takes place on a very small pitch and can be very confusing at first (er, where's the ball?). Once you get in the swing of things, you'll discover it's a fairly neat little representation of that cross between soccer, rugby and all-in wrestling that is Aussie rules.

The last game on the pack, *Soccer Challenge*, just has to be seen to be believed. Don't expect to play a game of footie. What you get instead is various training exercises, played competitively, with lots of alien-like things wibbling around. Nurse!



■ **What *is* occurring here? *Soccer Challenge* is a very silly game. Very silly indeed. Super silly. Sillier than a very silly thing.**

4 Most B, B & B is a fairly impressive compilation, one of very few to attempt to combine arcade games and management sims in one package. Well done Alternative, as our dear old friend in Cornwall used to say.

compilation

■ Soccer Challenge	55%
■ Australian Rules Football	60%
■ Soccer Boss	57%
■ Rugby Boss	73%

63%

VERDICT

all

QUATTRO SPORTS

CODEMASTERS • 0926 814132
£3.99 CASSETTE

This Codies compilation has been out for ages, but somehow managed to slip past our detectors on its release. It's still in the shops, and what better place to give it a going over than in a sports compies round-up? Dunno. So what are waiting for then...?

OK, first up it's *Grand Prix Simulator* by the Oliver Twins, which is basically *Supersprint* done in the style of *Supersprint*. *Pro Ski Simulator* is *Pro*



■ ***BMX Simulator*: written by 12 year old multi-millionaire software dude Richard Darling, back when he was sixteen.**

Skateboard Simulator on snow and *BMX Simulator* is *Supersprint* on bikes. All three are rotate-and-thrust controlled games that owe more than a passing debt to *Asteroids*.

Quattro packs represent excellent value, though this mid-eighties back catalogue material does look quite 'cheap and nasty' in relation to more recent games. Occasionally these packs throw up a real gem though, and here it comes in the form of *Pro Snooker Simulator*, a simple yet very playable and highly enjoyable (can you guess from the title?) snooker simulator.

Pro Snooker is, we'll have you know, probably worth the asking price on its own. "Buy one, get three free", that's the sales pitch the CodeMasters crowd should be using. And they should get that woman from *Lovejoy* to be in the adverts...

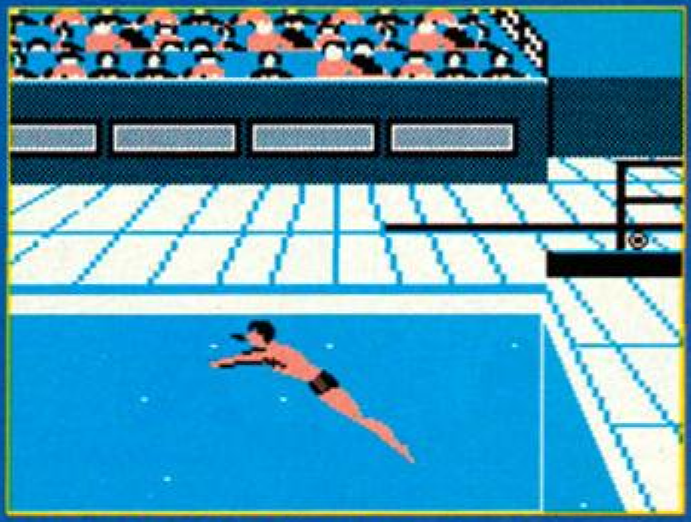
compilation

■ Grand Prix Simulator	56%
■ Pro Ski Simulator	62%
■ Pro Snooker Simulator	76%
■ BMX Simulator	60%

64%
VERDICT



■ **The Hammer Throw (*Summer Edition*): mis-time it and you'll end up with a hammer wrapped round your head. Oops.**



■ **The Diving bit in *THe Games – Summer Edition* is probably the best of all the *Mega Sports* gamelets. Diveabunga!**

MEGASPORTS

KIXX • 021-625 3388 • £14.99 CASSETTE, £19.99 DISK

Thirty six games on a budget compilation. Super bargain of the year – yowee! Er, hang on a minute, that Kixx (budget house) logo is a bit misleading. Fifteen and twenty quid is a darned sight more than traditional. budget prices. And hang on another minute, there aren't 36 full games on here at all, just five Epyx things with a handful of sporting mini-games on each. What a con! (*Er, figuratively speaking – ed.*)

These five Epyx mini-compilations vary from the dire (*The Games – Winter Edition*: some very sad ice-based shenanigans) to the reasonable (*The Games – Summer Edition*: groovy gymnastics in the gym and off the diving board).

Very few of these games (the biathlon and that's about it) involve the joystick-destroying waggle-back-and-forth control technique. The control methods differ for each game, and most of the time you haven't got a clue what you're doing. The Luge, for instance, seems to run just the same whether you have your hands on the joystick or not.

There are a few reasonable games in here (you have to hunt around for them!) but the majority are pretty crap. Put them all together in one big bundle though and it can be quite fun, as you dip from one game to another. That's if you've got the disk version. Tape owners will be taking a trip to the most hellish vision of multi-load that the human race has yet experienced. Aaaaaaaaarrrrrrgg... (pause for breath) ...gggghhhhh!

compilation

■ Summer Games	38%
■ Summer Games 2	50%
■ The Games – Summer Edition	63%
■ The Games – Winter Edition	24%
■ Winter Games	56%

55%
VERDICT

Wot a lot of games!

So what sports do you get for your mullah then? You get 36 of them (32 excluding the 'swaps'):

4 x 400 Metre Relay; 100 Metre Dash; 100 Metre Freestyle; Archery; Biathlon; Bobsled; Cross Country Skiing; Cycling; Diving; Diving (again); Downhill Skiing; Equestrian; Fencing; Figure Skating; Figure Skating (again); Free Skating; Freestyle Relay; Gymnastics; Hammer Throw; High Jump; Hot Dog Aerials; Hurdles; Javelin; Kayaking; Pole Vault; Pole Vault (again); Rings; Rowing; Skeet Shooting; Ski Jump; Ski Jump (again); Slalom; Speed Skating; Speed Skating (again); The Luge; Triple Jump; Uneven Parallel Bars; Velodrome Cycling.

Blimey, you could hold your own Olympics with that little lot (but where's the footie?).

GOOD SPORTS

The first multi-event sports game was the coin-op *Track and Field*, a mad waggler that evolved into the first home computer multi-eventer, the classic *Daley' Thompson's Decathlon*, famous for being responsible for more broken joysticks than any other game in history. To make your (white) Daley run you had to shake the 'stick furiously, left and right, until either (a) you won, (b) you lost, or (c) the 'stick broke off in your hands and you ran off crying.

Decathlon was followed by further Daley Thompson multi-gamers *Supertest* and *Olympic Challenge*. Some wag even designed a 'jockstick', two foot pads to take the place of the left and right joystick controls. You 'ran' on these, and your on-screen hero would follow suit. Sadly (fortunately?) no-one would agree to market the things...

The first big sports pack was Ocean's *Game, Set and Match* . The rest, as they say, came later...



■ Level 2 is a bit of a maze. Unless you know the layout you could spend all day going round in circles (or, er, straight lines)



■ Ah, look, a bit of shielding. Only one problem: it's the other side of that wall. And it's about a twenty-minute trip...



■ Hmm... we don't like the look of those parcels around that shielding. They could be good news, they could be bad

RAVE

HIDEOUS



ALTERNATIVE • 0977 797777 • £3.99 CASSETTE

Oh, it's just so frustrating, so difficult, so... so... *hideous*. And in fact that's what Alternative's latest release is called! (Clever little joke that, eh?) Only the thing is, it's not really a joke. Before long, *Hideous* will have you tearing your hair out, gnashing your teeth and hanging from doorways, gibbering uncontrollably.

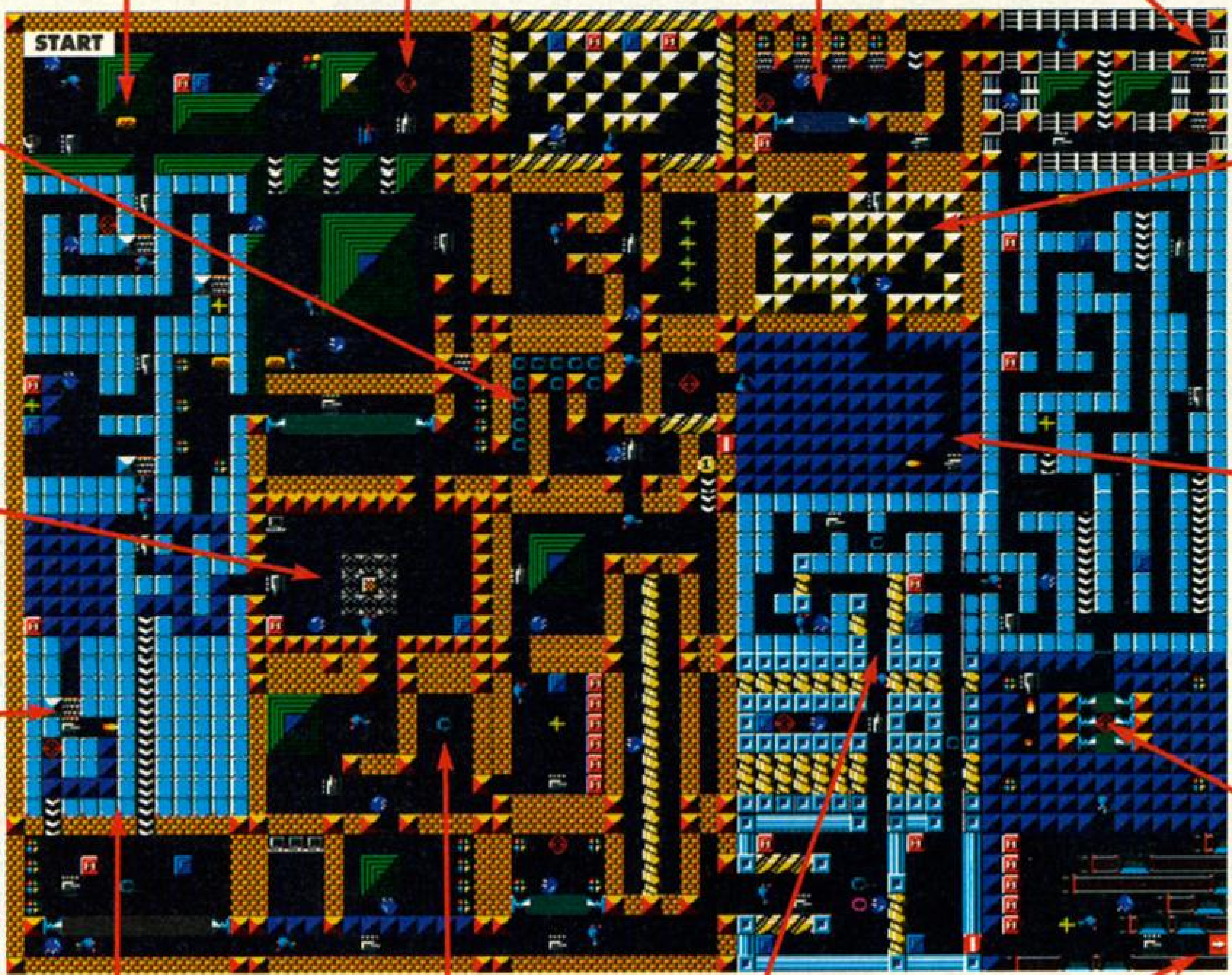
Hideous is a rather old-fashioned-looking arcade puzzle game. You guide a little tank around lots of different screens, collecting lead casing so that you can shut down a central nuclear reactor. You're going to need to draw a map, though, 'cos this level is five screen wide and six deep. That's an awful lot of space to get lost in.

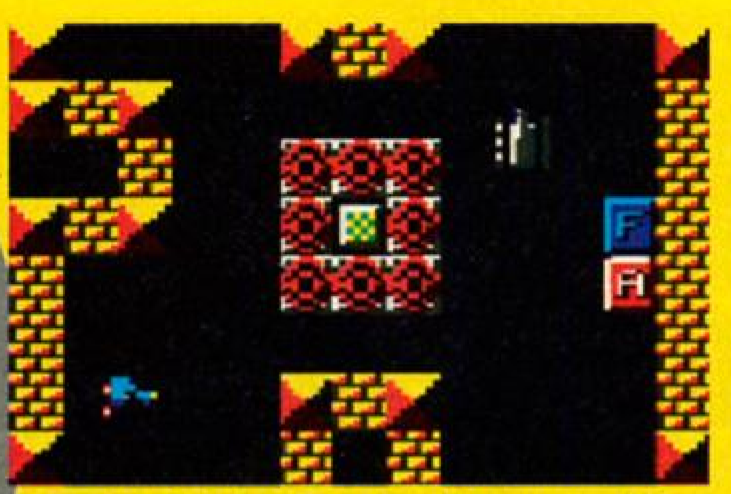
If *Hideous* looks old-fashioned, it plays old-fashioned too. Forget fancy scrolling routines, this one just uses flick-screen scrolling. And your little tank moves along with all the vigour of an arthritic slug.

Nope, tanks aren't renowned for speed. They're

Your very own Level 1 survival guide

swell maps





■ Good grief, you've actually managed to put all the lead shielding around the reactor. Now it's time to bumble off to the exit



■ Well, you gonna drive through these blocks and take your chances, or drive round the outside?

FIRST DAY TARGET SCORE

Finish Level 1 (even *with* the map!)

not renowned for fuel economy, either. In fact, if you don't regularly top up your fuel supply (by shooting at the blue blocks marked with an 'F') you blow up. Really, you've got no excuse for running out, though, because there's a dirty great bar running vertically down the right hand side of the screen showing you how much fuel you've got left.

Apart from fuel, you also need bullets. How else are you going to shoot the fuel blocks? You collect more ammo by driving into or shooting the red 'A' blocks.

You need the ammo for quite a few things, actually. For a start, you haven't got this place to yourself. It just happens to be infested with alien critters. On Level 1 they just bimble about, getting in the way, but later on they start shooting at you...

Don't drive into these aliens at any stage, though, because your tank's shield loses energy. And when it's all gone... you guessed... boom!

SECOND OPINION

"Hideous is very pleasant but quite dated. It's not very hideous, is it? I got five bits of the shielding without even needing a map. (Well we'd like to see you get the rest – Ed)"

LINDA BARKER

Other things to shoot at? Well firing at the little green parcels gives you extra points.Special blue blocks you have to shoot into oblivion if you're to make any further progress (they, ahem, block the way). Finally, there are funny yellow cubes that have a habit of sitting in doorways and have to be pushed into clear areas of the screen.

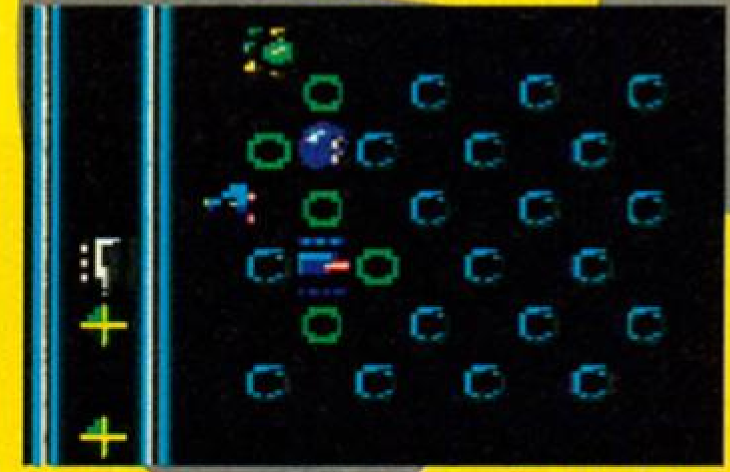
Shooting things won't get you out of every fix, though. There are special doorways that will only open when you're carrying something (bizarre!). These doorways are everywhere and can be an absolute pain in the... (snip! – ed). Objects you can carry include a skull (found on the first screen), lumps of rock and even bits of the lead shielding itself.

And there's more! To make life even harder there are escalator-type things which will only let you travel in one direction. Which makes it all the more important to map the level as you go along – you can go round and round in circles for hours. It's so, so easy to miss the one exit that will bring you out into a new area.

Any more problems? Well yes, there are, actually. Like the laser beams that will fry your little tank to a crisp if you don't turn them off first. You turn them off by touching four special icons (which may not necessarily be on the same screen). Then you must dash through the gap – the lasers are only switched off temporarily. →



■ Shoot first, ask questions later. Actually, you can probably forget the bit about the questions



■ Blimey, look at all those smart bombs! I should clear off, if I were you, and leave those aliens to it...



■ Ha ha – you've been blown up! Wait a minute, what are we laughing for? That's what comes of barging straight in...

Nasty Surprises

On Level 1 you'll see enough of the game's nasties to make you realise what's in store later. Here are some of them.



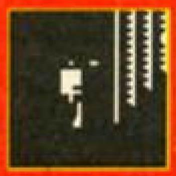
One-way corridors

As you might imagine, these will only let you travel in one direction. Not nice. They usually mean lots more travelling around to get to where you want to go.



Doors

No problem at all, these. As long as you're carrying something, that is. If you're not... well, you'd better go and find something, hadn't you? Can be a real pain in the neck.



Alien

Pretty easy on this level. Either avoid them or shoot them. Run into them and you lose energy.



One-way doors

Great. You walk through without a care in the world and then change your mind. And you can't go back. More irritating than Pauline Fowler.



Smart bombs

Handy for wiping out all the aliens on a screen. If you don't scarper before they go off, though, they weaken your shield. Not fair. Sometimes the aliens set them off...



Bonus block

Great! These can strengthen your shield – or not. The fact is, they can weaken it too. Life is a gamble sometimes... steer well clear if your shield's getting a bit dodgy.



Fuel pod

Shoot it to replenish your fuel supplies. Only don't forget, because if your fuel drops to zero you explode! Bit of a problem, really.



Ammo pod

Shoot it (or drive into it) to fill up on ammo. The ammo's not just for killing aliens – you may need to shoot blocks out of the way too.



Laser beams

These are horrid. To get through you need to turn them off. You do this by touching four control icons in the right order. Find them either on the same screen or an adjacent one.



■ Oh yes! There's the Level 3 reactor. Oh no! How do we get to it? Level 3 is getting tough already

And then, of course, there are the smart bombs. To activate them you just touch them – when they go off (after a short delay) they wipe out all the baddies on the screen. Trouble is, if you're on that screen at the time, your shield is weakened. The knack is to activate the smart bomb then hop it to the next screen and wait for it to go off. Sometimes this isn't possible. Then you have to try to get one of the aliens to activate it while you stay out of the way…

What a nightmare! To actually complete the level you have to find all eight pieces of lead shielding, place them around the reactor and then find the exit. What makes it all just about possible is the fact that, dotted here and there, you will find computer terminals. These display a little map showing the location of the remaining pieces of shielding. The exit is easy enough – it's at the bottom right-hand corner of the level. Needless to say, you start at the top left.

Hideous has four levels, each one harder than the last. On Level 1, you'll never come across more than two aliens on a screen, while on Level 2 you can get four. Don't forget, each brush with an alien weakens your shield. Still too easy? On Levels 3 and 4 the aliens shoot back…

For all the frustration, difficulty and sluggishness of this game, it is still a real corker. *Hideous* combines some brain-teasing puzzling (of quite a high standard) with some not-bad arcade action. Each level is huge and will take quite some exploring, while the difficulty, especially at the higher levels, is enough to keep you playing for weeks.



It's not all good, though. On Level 1, for example, there is only one route through from the left-hand side of the level to the right. And considering that the reactor is on the left and half of the lead pieces on the right, you end up going to and fro over the same old screens time and time and time again. It's a bit of an anticlimax, really, because the more you explore the level the easier it becomes. The puzzles get tougher, sure, but the more progress you make, the more you understand the layout of the level and the more screens you clear. Pretty soon there's no more exploring to do and nothing left to shoot, just a lot of tiresome lead-ferrying.

Level 2 is much the same. It's more obviously maze-like, though, so the mapping is even more important here. Disappointingly, there are no smart bombs and no doors. Level 2 is actually quite a lot easier than Level 1 (except for having more aliens).

Level 3 is a different kettle of fish entirely. The doors and other objects are back, and the aliens shoot at you. We can't tell you what Level 4 is like because we, er, didn't get that far…

Hideous is pretty old-fashioned, colourful but rather slow-moving, and has no title tune and few in-game fx. Not a great recipe for success, then. What sets it apart though is its sheer size (four large levels), surprisingly tough puzzling element and not-bad-at-all arcade action. The only thing that stops this budget corker scoring a mastergame is the frustration element. There's just too much to-ing and fro-ing over the same old ground.

Otherwise, this would be one of the best games (especially on budget) we've seen for a while. As it is, it's still well worth the £4 asking price.

Rod Lawton

freeze frame: What's going on?

God grief, this is a complicated little game, isn't it? Well just to help you out, here's a brief guide to what's what. Oh, what's that? You want to know about this 'Cheat Mode Active' message. Well, I'm not sure we should tell you…





■ Finding the exit on Level 3 isn't hard. It's getting all the blocks to the reactor that's hard



■ Look out, those aliens shoot back! You finish Level 1 and you think you know it all… you'll find out

graphics	**72%**	**grab factor**	**92%**
Colourful and clear, but they don't move terribly fast		You know straight away you're in for a good blast	
sonics	**60%**	**staying power**	**90%**
No title tune, but the in-game fx do the business well enough		It's not just that it's hard – it's the size of the levels that's the real challenge	

88% VERDICT

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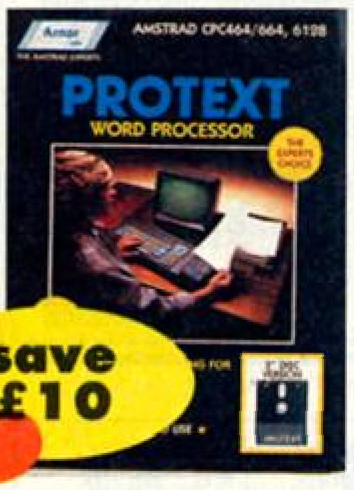
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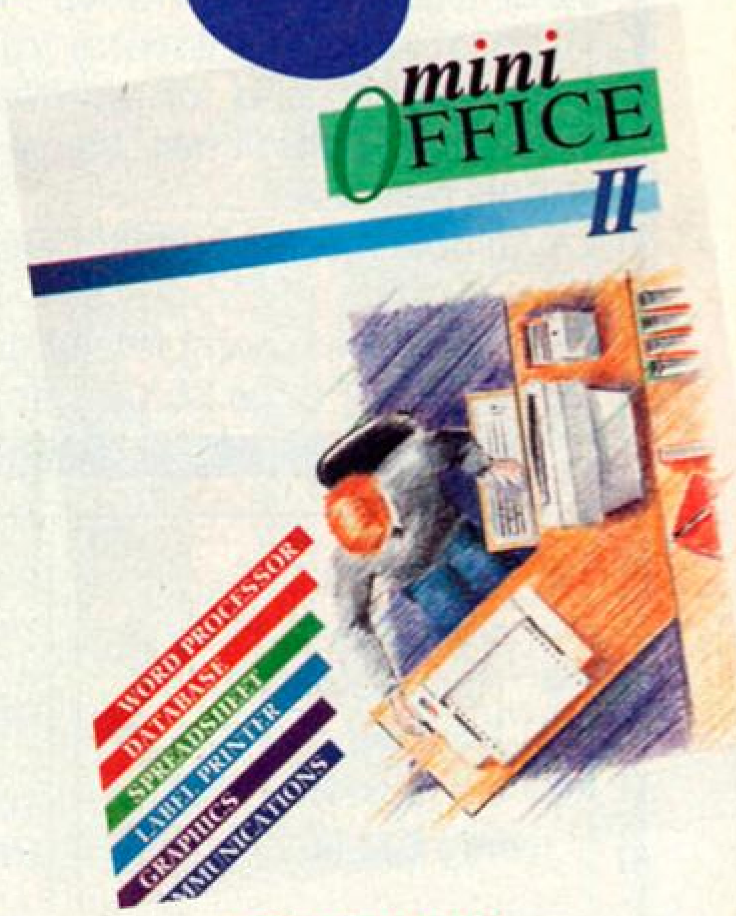
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Cheat mode



Phil Howard introduces another crammed four-page cheat section. Amongst the goodies on offer (check out the covertape) are no fewer than five pokes for past *AA* covertape games. Send your cheats to: Cheat Mode, Amstrad Action, Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2BW...

RAMBO 3

WINNER! £10

Lee Rouane, notorious Multiface meddler from Woolley Moor in Derby, in a brief change of discipline, has stumbled into a charming little keypress cheat for *Rambo 3* – Redefine the control keys as C,H,E,A,T,SPACE. Then, whilst playing the game, press all the cursor keys down (at the same time) to skip a level. Great stuff, Lee, it's high time you had a prize.

PUZZNIC (AGAIN!)

Continuing the *Puzznic* keypress saga from *Cheat Modes* 76 and 80, Duane Saunders of Brightlingsea has spotted that as well as getting infinite retries and pressing N for the next level, you can press Shift to pause the game without having the menu blocking your view. To carry on, press Space.

HAMMERFIST

Mc Ryan Richardson of Colchester has been giving *Hammerfist* some hammer and has nailed a few tips:

Level 1: In the first room, knock out both computers (headbutt) and the three transporters. Destroy the plants with Hammerfists lasers then Flic-flac to the top.

Level 2: Destroy boxes and tank with the laser. To destroy the thing over the doorway, shoot upwards so that the laser bolts rebound on to it.

Level 3: Shoot the canisters before they hit the ground. Headbut the cable to recharge. Shoot the 1st wall. Rebound the lasers off the ships bottom to destroy the 2nd wall. Shoot the 3rd wall. To destroy the crab type thing, shoot the claws, then get as close as possible and shoot the mouth/eye.

Level 4: High Flic Flac through the screen. Use the electric cable to recharge. Rebound laser bolts onto the ant.

From here the game is simple. Keep recharging! →

Multiface : Memorabilia

Well, it has been a long time, hasn't it? Since we had a whole bunch of Multiface pokes like this, that is. Multiface miracle workers Lee Rouane of Wooley Moor and Paul Harper of Folkestone are responsible and, what's more, there's a whole heap left over for next month's mag...

NAME		ADDRESS	POKE	EFFECT
Six Appeal Compilation (t)				
Rick Dangerous		88C3	A7	Inf lives
		9F35	A7	Inf fire
		9F90	A7	Inf Dynamite
Satan		6DEB	00	Inf lives
P47 Thunderbolt		27DC	00	Inf lives
Twin World		345E	A7	Inf energy
		3658	00	Higher jump
Pick 'n' pile		039F	FF	255 lives
Capcom Collection	(D)			
UN Squadron		1CDB	00	Inf lives
LED Storm		5ADB	00	Inf energy
Strider 1		2BE9	00	Inf lives
		2AC2	00	Inf time
Strider 2		12E6	A7	Inf time
		017E	00	Inf lives
Dynasty Wars		2B3B	C9	Inf energy
Ghouls & Ghosts		3182	A7	Inf lives
Forgotten Worlds		00F3	00	Inf energy
Realm	(t)	7C80	00	Inf lives
Metropolis	(t)	2C69	00	Inf lives
Bubble Dizzy	(t)	6E72	00	Inf lives
Spellbound Dizzy	(t)	BC52	00	Inf lives
Dizzy Yolk Folk	(t)	185F	00	Inf lives
Slightly Magic	(t)	40F1	00	Inf lives
Dizzy down the Rapids	(t)	22ED	FF	255 lives
Spike in Transylvania	(t)	1691	00	Inf lives
Afterburner	(t)	1D58	00	Inf missiles
Ruff & Ready	(t)	5301	00	Inf time
Roadrunner	(t)	023F	00	Inf time
Addams Family demo	(t)	12D0	00	Inf lives

THE MULTIFACE WAY

The (t)s and (d)s before the address indicate whether the poke was written for a tape or disk game (they might work on both, it's worth a try). Just in case you don't already how to put in these BLACK BOX POKES, here are the steps to success.

a) Load the game as normal.
b) Press the RED button on the MULTIFACE.
c) Press "T" for tool.
d) Press "*" to make sure you select the code.
e) Press "H" for HEXADECIMAL input.
f) Press "SPACE" for input.
g) Type in the ADDRESS (4 characters, e.g. 3A7C)
h) Type in the POKE (two characters, e.g. A7)
i) Press "RETURN"
j) If there is more than one poke goto (f)
k) Press "ESC" back to the menu.
l) Press "R" return to the game.

NIGHT HUNTER

Ben Fortescue of Cheltenham has been staking his claim to Ubi Soft's *Night Hunter*, and has come up the following tips – just when you though it was safe to go back in the (holy) water!

● Stay in bat form for as long as possible. It's faster than the werewolf or vampire and makes you harder to hit. Fly about medium height so that the characters can't hit you, but you won't be delayed by avoiding ledges and walls.

● For anyone who hasn't figured out how to jump across the holes on the high ledges, only the werewolf can do it. Crouch down next to the hole, then push diagonally in the direction required and press Fire.

● The bald bloke and the one with the red hair (green on a colour monitor) are equally aggressive, and get more so as you progress through the levels. The women never attack you unless they have crosses, and they don't follow you. If they do have crosses, fly to them above their head height in bat form, then change into vampire next to them and grab and punch them quickly.

● The axemen will always follow and attack you if possible. A hit from someone with a stake kills the the vampire instantly. A few archers will keep firing at you but most will only bother if you stay in the same place for a long time. The policemen, on the other hand, fire constantly and must be dealt with in the same way as the women with crosses.

● Ducking doesn't protect you from either Van Helsing's stakes or the holy water thrown by priests. Priests are best avoided, since getting close enough to bite them without getting hurt is very difficult.

● Witches will often just fly past without attacking you. Sometimes, however, a certain witch will try as hard as possible to attack you. If you are in vampire or werewolf form just duck, if you are in bat form you can't outfly them since they go faster. Fly on to another screen and quickly go to the top of the screen. When they enter they generally can't climb fast enough and will miss you.

● Vultures fly at the same speed as you in bat form – the best way to shake them off is to change direction suddenly. Flying as high or as low as possible helps. If in vampire or werewolf form, duck.

● Van Helsing can move from screen to screen in "warp" fashion and will often show up beside the end of level door, when you think you've left him behind. Try to leave him on the opposite edge of the closest body of water to the the door – this tends to slow his "warp" down. The instruction book states that touching Von Helsing's stakes is highly damaging, but touching does not kill you. It is not, however a good idea.



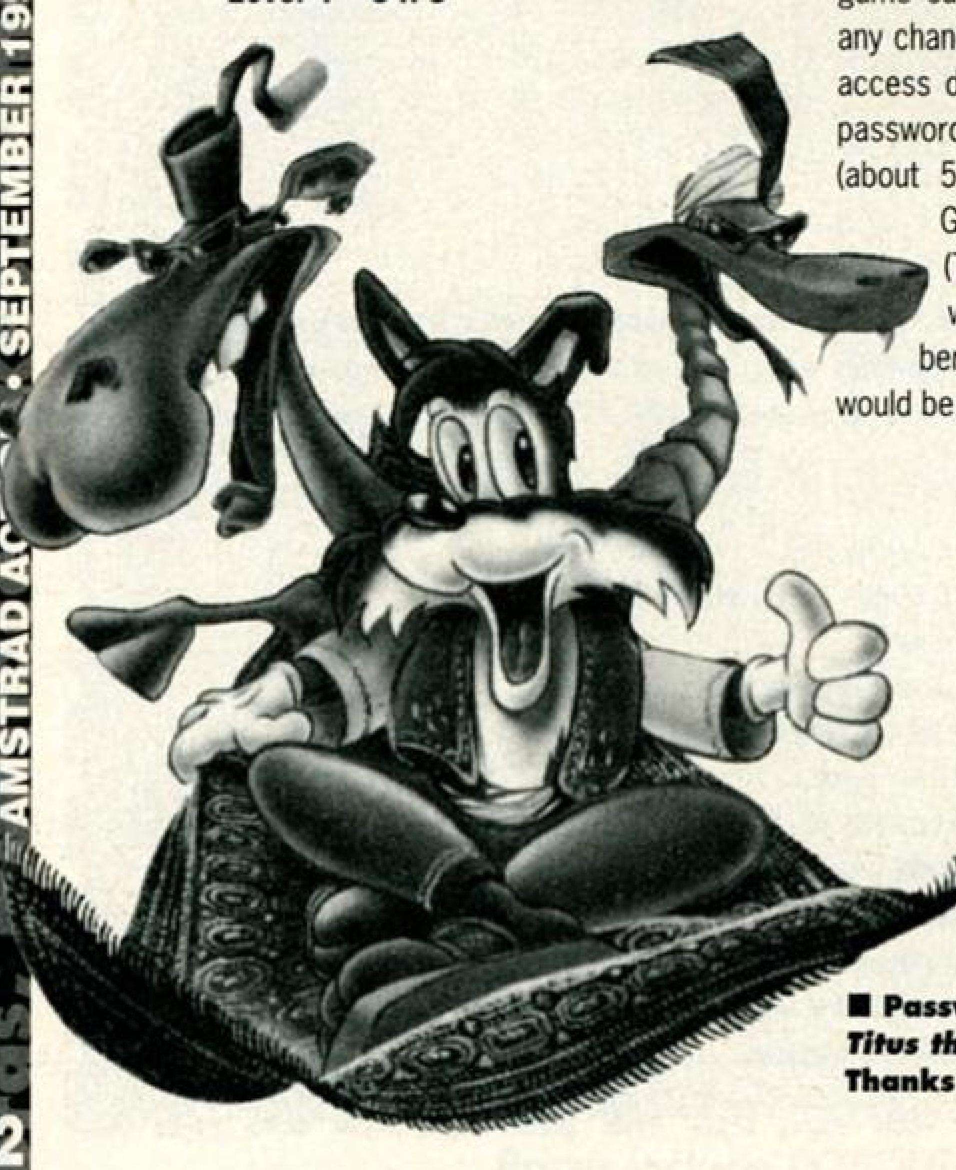
■ **Is *Night Hunter* leaving you drained or making your blood boil? Try these tips...**

TITUS THE FOX

Chris Dawson of Gainsborough reveals the first four passwords to *Titus the Fox*.

In addition, he has a tip: When you are on the last level, jump on to the blue awnings to get at the other places you can't reach.

Level 1 – 5772
Level 2 – F8F4
Level 3 – 1D76
Level 4 – C4F8



■ **Passwords to the first four levels of *Titus the Fox*? Don't mind if we do. Thanks to Chris Dawson of Gainsborough**

CROCO MAGNETO

Interested in a cheat to help you beat *Croco Magneto*? Steven Wiggins of Hemsworth has found one – Before you run the game, type `LOAD"CROCO"` (Enter) then type `EDIT 530` (Enter). Delete the bit that says `"IF A(4)=8 THEN"` (Enter). Then type `RUN` and you will be invulnerable.

THE SENTINEL

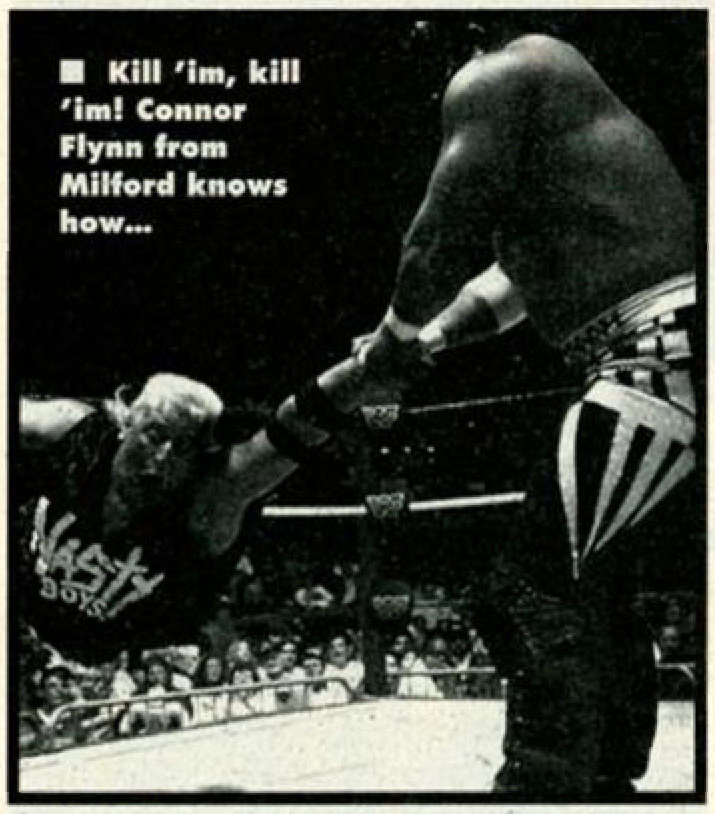
Now then, remember a long time ago there was a game called *The Sentinel*? (It was a real classic – any chance of getting it for the covertape, Rod?) To access different landscapes (puzzles) you typed in passwords. I must admit they are a bit overdue (about 5 years), but, undaunted, Iain Gibson of Glasgow has been collecting them for us. (There is some logical way that the program works out the password from the level number. If anyone can work out how it's done I would be interested to know.)

Level	Password
0009	78959942
0014	**89619176**
0018	34259849
0019	**74546878**
0024	84620577
0028	**85414694**
0029	55711979
0035	**46855644**
0037	34454988
0047	**49877068**
0064	16297268
0086	**92848084**
0090	05480507
0103	**88780704**
0125	64887929
0149	**14935556**
0179	21117451
0202	**83953975**
0232	95687509
0233	**55575895**
0258	66754052
0284	**89456931**
0312	89815498
0344	**62879928**
0370	17459987
0401	**39702949**
0432	44630967
0467	**10929100**
0500	50385509

WRESTLE MANIA

Connor Flynn (Garret's brother), from Milford in Ireland, is into *Wrestle Mania* and has come up with a way to beat the competition:

● Use British Bulldog or Hulk Hogan. Start the game, enter the ring and leave it again (it's easier outside). Never stay out for more than about 10 seconds, though. When your opponent is coming out to get at you, stay in the middle of the screen, outside the ring so that he can grab hold of you. Start to waggle the jostick until he runs out of energy and is on the ground, then stamp on him until he has no energy left. Go back to the middle of



■ Kill 'im, kill 'im! Connor Flynn from Milford knows how...

the ring – your opponent should follow. Catch hold of him and do a bit more waggling until he is on the ground, then move up the ring and back down, then press Fire to pin him down. You can repeat the method with other opponents.

TARGET RENEGADE



■ *Target Renegade* could give you a whole heap of trouble – unless you've got this selection of tips from Dun Laoire's Malcolm Dowse...

Malcom Dowse of Dun Laoire In Ireland has whipped up some tips to help you do some seroius GBH in *Target Renegade*:

Level 1: The bikers are better tackled using the straight flykick, rather than the diagonal kick. Generally, use the hammer if you want, but the guys are just as easily disposed of without a weapon by kneeing them in the stomach and beating them up on the ground.

Level 2: The girls are best not kneed, it is easier just to use the flykicks and then beat them up on the ground. The boss appears on the third screen. You can do well by hiding behind a girl. Use the chain if necessary.

Level 3: The dark green blokes can be destroyed by kneeing, but the bright green ones need more attention as they are excellent at fly-kicks. Either use the club or knee as they move to pick up the club.

Level 4: The black guys have a fierce kick, so use the flykick. Same with the dogs, but you can punch and back-kick them also. The others have to be killed using a special method because they can duck. Flykick them and they will duck, then as they creep up on you back-kick them. However, if they are on their own, just knee them. Make good use of the brick at the end of the level.

Level 5: Use the method in level 4 to dispose of the bodyguards, try to always have three or one on the screen at the same time. When you have three, two will follow you, leaving one by himself who you can kill. The snooker cue will help quite a lot. Mr Big can be killed by the back-kick method, or with the cue. Watch out for his bearhug, which will loose you a life.

Once you have waxed Mr Big you will return to the start, but this time it is much harder – the guys learn to duck and become much stronger. →

KEYPRESS CHEATS GALORE!

WINNER! £10

Arghhhhh! I used to think I was pretty hot at finding key-press cheats but this guy, Paul Harper (my hero) of Folkestone has to be the best of all time! Using his Multiface and *Insider* he seems to be just about unstoppable (you'll have to let me know how you do it one day Paul). In one go he has found 14 (yes 14) new ones. You'll have to wait till next month for the rest, but for now, get a load of these goodies:

Periscope Up by Atlantis: Hold down the COPY key then start the game by pressing Fire on the joystick to get yourself infinite lives.

Moving Target by Players: In the hi-score table type GARETH BAKER for invulnerability.

Moontorc by Atlantis: On the title screen type KINDERLEBE OBIZUTH BE GONE (space between words) for invulnerability.

Superkid by Atlantis: On the title screen type I LUV ATLANTIS (space between words) for invulnerability.

Crackup by Atlantis: At any time during the game press H to pause, then hold down the SMALL ENTER key, press Fire on the joystick to return to the game and you are transported to Level 2. Press the SMALL ENTER key at any time to go to the next level.

The Hit Squad: In the hi score table type BIGTHING for invulnerability.

Cobra Force by Players: Pause the game, type OPTIMUS, then unpause by pressing P – you get infinite lives. Right cursor key advances a level.

CISCO HEAT

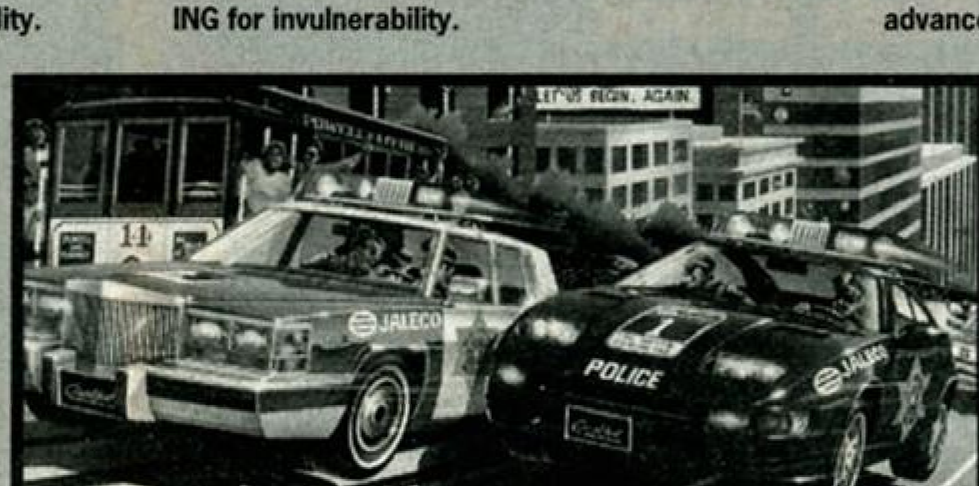
Both Michael Codd of Barrow in Furness and Sacha Barnes of Melton Mowbray have sent in Keypress cheats for *Cisco Heat* – To advance to the next level, press the asterix, backslash and forward slash keys at the same time.

SHANGHAI WARRIORS

Paul Woodcock of Bracknell has found an update to the *Shanghai Warriors* keypress poke in *Cheat Mode 81* – After typing OUTLANDS into the hi-score table, press the CLR button and you advance a level.



■ Fancy invulnerability in *Moving Target*?



■ Fed up of getting nowhere on the streets of San Francisco? Here's a keypress cheat to advance levels...



■ Infinite lives AND level advance in *Cobra Force*

covertape pokes

4 GAMES PACKS 1 & 2

The incomparable Graham Smith of Street has been fiddling with Atlantis's *4 Games Packs* this month, and has devised a suite of cheats for game packs nos. 1 an 2. The games included therein are *Superkid, Spooky Castle, Crossfire, Crack up, Gunfighter, Snowball in Hell* (all of which get infinite lives), *Skatin' USA* (which gets infinite energy and ammo), and *Periscope up* (infinite subs and scouts).

RANARAMA, MAZE MANIA *(AA79 covertape)*, FORBIDDEN PLANET & THE ADDAMS FAMILY *(AA81 covertape)*

In true Smith style, Graham has done over the *AA* covertapes and found pokes for *Ranarama* to help out with sorting the runes plus infinite lives for *Maze Mania* (*AA79* – covertape 13). *Forbidden Planet* and *The Addams Family* (*AA81* – covertape 15) both get infinite lives.



SWEEVO'S WORLD *(AA74 covertape)* & ANARCHY *(AA80 covertape)*

Paul Hornsey, of Linlithgow Bridge, is becoming a regular name in the poke section. He has created a poke for *Anarchy* (*AA80* – covertape 14) which gives 255 lives and invulnerability. He has also produced a cheat for *Sweevo's World* (*AA74* – covertape 8) which gives infinite lives.

SPINDIZZY *(AA69 covertape)*

Ross Younger of Edinburgh has been tinkering with *Spindizzy* (*AA69* – covertape 3) and has created a superhack. It plays around with the map function and gives you a sort of teleport. While playing, press M, then use the cursor keys to move location. Although the screen remains the same when you return (ESC) the computer thinks you're in the new location so moving off will transport you to the new area. Care must be taken, however, as you could just as easily land up in mid air, then unless you press the M key pretty quickly, you've had it! Now at last you can reach those far off places with strange-sounding names.

New Kids Block

If you're new to this lot, here's a few tips to get you going with the pokes on this month's covertape:

1) Load the poke you want from the covertape into your computer.
2) Take out the covertape and put in your game tape or disk.
3) Type |DISC if you are using a disk poke.
4) Type RUN to run the routine (not RUN "" (CTRL+ENTER) as you normally would)

You should find that the game will load normally, or you will be given instructions what needs to be done. Easy, eh? They don't call us simple-minded for nothing!

HELP

If you're stuck on a game, or you simply can't get hold of an old classic, send a postcard (or write on the back of an envelope) to:

Games Helpline
Amstrad Action
Beauford Court
30 Monmouth Street
Bath
Avon BA1 2BW

Desperately wanted: *Shadow Dancer* on tape.
Matthew, 0942 727297

Wanted: *Bards Tale* or *Lords of Chaos* tape/disk. Will pay or swap.
Thurstan, 081 940 8877 after 5pm

Wanted: *Dan Dare* for the 464.
Stan, 0533 834246

Help wanted on *Platoon*. I can not find my way out of the tunnel network, has anyone got a map? Please help! I can offer help with *Dizzy 1, 2, 3* and 4.
Sean, 0532 441386

Help! In *Spellbound Dizzy*, where are the yolk-folk except Dylan and Grand Dizzy, and how do you rescue them?
Huw, 0929 436208 after 4pm

Games wanted: *Double Dragon 3, Out Run Europa* and others. Will swap *Rick Dangerous 2, Terminator 2* and others.
Wayne, 071 700 0715

Does anyone know where the secret room in *Rainbow Islands* is?
Daniel, 0209 890264 4-6pm

Help! I cannot get the password to Level Two of *Saigon Combat Unit*.
John, 0382 553557 4:30 - 9:00pm

Has anyone got a cheat (or poke) for *Arkanoid*, as I cannot get past Level 9. Help given on *Saigon Combat Unit* (*hey, ring the guy above! – ed*), *Batman the Movie* and *Dizzy 1* & *5*.
Stuart, 0383 510609

Does anybody know how to get past the monster in ceardach calum (*Tir na Nog – AA covertape*)?
Gerwyn, 0792 864452 after 5pm

I need help in *Spellbound Dizzy*. I cannot get past the bear.
Ross, 0392 68045

I need *Elite*. Desperately!
Jon, 0634 372730

Action Replay

ADAM PETERS rounds up the latest selection of budget re-releases to land on the *AA* doormat in our expanded (box-out and tag-together friendly) *Action Replay* section. Tennis, American football, motor racing, submarining and extreme violence this month. Play it again, whatever your name is...

INTERNATIONAL 3D TENNIS

GBH • 0742 753423 • £3.99

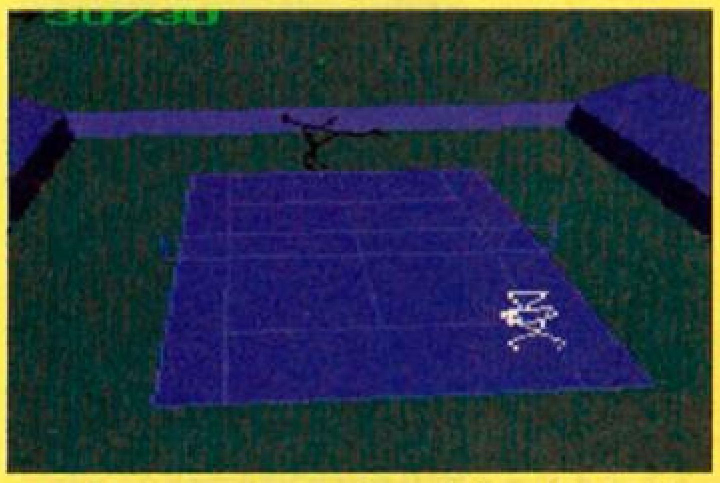
If L S Lowry were to program a tennis game for the CPC, it would probably look something like this. Er, actually it probably wouldn't, seeing as how L S Lowry can't program. And he's dead. And he'd be far more likely to write an art package anyway.

While it's clear that Mr Lowry would not, after all, write a game like this, there can be no doubt that L S would like this game immensely. It's got matchstick men and matchstick cats and dogs in it, you see. (Er, except the cats and dogs.) As a result, it looks really stupid, especially since the sprites follow true-to-life animation, with lines and triangles wobbling around all over the place. Très weird.

It looks nob, but how does it play? Really well, as a matter of fact. Most tennis sims are really difficult to get into, with tricky serving manoeuvres and getting-into-position strife to get to grips with. On the first skill level (Amateur) *International 3D* takes care of all that bobbins for you. It automatically moves your little man/woman/penguin into the right place and flashes like mad when it's time for you to hit Fire. You've only got to worry about trying to direct the shot away from the opponent.

Things get trickier on the higher skill levels (Semi-Pro and Pro) when you have to deal with returning the shots yourself. Yikes! The realism and spot-on gameplay means you'll want to start getting stuck into this advanced play as early as possible. (You can't lose on Amateur level – not unless you're really, really crap!)

Don't judge on appearances, fellow games-heads. Sometimes the ugliest people are the most interesting (that's what I keep telling people anyway), and the same goes for games. If tennis is your bag, then so's *International 3D*.



■ Is this a tennis match or is it a piece of liquorice and a piece of spaghetti sitting at either end of a ping-pong table?



■ Here's the scores on the doors... Look, I'm winning! What more evidence do you need that anyone can get the hang of this?

Original release: July 1990
Original publisher: Palace
Original score: 81% (AA59)
Today's view: Looks dead stupid, but plays better than any other tennis game. For the tennis novice *and* the hardcore.

AA VERDICT 78%

PRO TENNIS TOUR

HIT SQUAD • 061-832 6633 • £3.99

I can well remember playing tennis at school (Wednesday afternoons, Summer Term). Watch tennis on the telly and it's all grunts and leaps, fast-moving projectiles and top sporting action. Play it yourself – if you're as crap as I am – and it's all grazing your hands on tarmac as you fish dirty white tennis balls out from under wire meshing. Let's be honest, I played tennis for two hours, fifteen weeks a year, for six years, and in all that time I managed to return three serves and no volleys.

So I can relate to poor Esprit (the turbo-charged tennis ace you take control of in *Pro Tennis*) and his predicament. *PTT* is a very difficult game, you see, and you need to stick at it for a long time – using the serving machine practice mode as well – before you'll be able to return a shot in more than most flukiest of circumstances. So if you ain't got the staying power (and at least a modest interest in the sport) you'd better give this one a wide berth.

Serving seems difficult at first, but you get the hang of it real quick, and with a bit of practice you become less of a walk-over for the opposition. It's still much too tricky though, and can only be recommended in all honesty to tennis afficionados. The unconverted will be better off with the eminently more gnarlsome *International 3D Tennis* (above).



■ Now this is what a tennis sim is supposed to look like! Sadly it only gets halfway to being what a tennis sim should *play* like.

Original release: December 1989
Original publisher: UBI Soft
Original score: 72% (AA53)
Today's view: Average tennis sim which takes an awful lot of getting used to.

AA VERDICT 54%

No faults?

We're an impetuous bunch here at AA Towers and the appearance of two well-known tennis sims in the same month is all the excuse we need to round up all the cat-gut games out there.

Out of the five widely available tennis sims, only *International 3D* really shines. As well as *Pro Tennis Tour*, there's also CodeMasters' similar *Pro Tennis Simulator*. Easy to get into, it smells of the budget shelves (blocky graphics, little animation) but chalks up a very worthy 52% on the AA brill-o-meter.

Then there's good old Loriciel, with their *Tennis Cup* games (most notably *Tennis Cup 2* on cartridge). *Pro Tennis* has the edge on cart because of the dead lush graphics. *Tennis Cup* probably sneaks home on the conventional formats, largely because it's not quite as off-puttingly hard as the UBI Soft game. We'll give *Tennis Cup* 54%, putting it level with its French comrade. Last but not least, golden oldie *Match Point* scores a decent 61%.

So that's it. Four average games that look OK, one brilliant one that looks crap. Where's *your* money going?

CYBERBALL

HIT SQUAD • 061-832 6633 • £3.99

This was called *Speedball* on most other machines. So why's it called *Cyberball* here? Dunno, but suffice to say that if the word 'speed' were included in the title of this game, we'd be calling the Trading Standards Office. Maybe it should be called, as Rod suggested in a fit of acerbity (look it up), *"Slug-like-blobs-sliding-very-slowly-into-each-other... ball."*

We don't really hate the game, though. It offers American football fans a full range of plays. These are loaded three at a time – once you get bored of the current choices you can choose to load up the next batch. It's a far better arcade representation of the sport than anyone else has ever managed. And it's a lot more besides...

See, this isn't American football in the year 1992; it's American football in the year 2022. The thirty years we don't know about yet have seen a few refinements to the sport, including the introduction of a ball that explodes, killing anyone unfortunate enough to be in possession at the time. Luckily (for humans) the players are all robots. Except the ones who hang on to the ball for too long; they're just bits of robots.

There's a great deal of tactical depth to this game and gridiron fans will love it, but the sluggish pace prevents it from being the sort of stunner it should have been. Think of those poor blown-up robots. Think 'is it worth it'?

Original release: May 1990
Original publisher: Domark
Original score: 82% (AA58)
Today's view: It's American football with an exploding ball. Slow but fun.

AA 71% VERDICT



■ **Don't panic lads, but the ball's just exploded. Jonesie, you get a bucket of water. Trev, go and call the fire brigade.**



■ **There's a fair old rumble going on here. Why don't these lads take up a nice hobby, like chess. (*They're robots – ed.*)**

'L' marks the spot – this is the player you're currently controlling (in a silly manner)

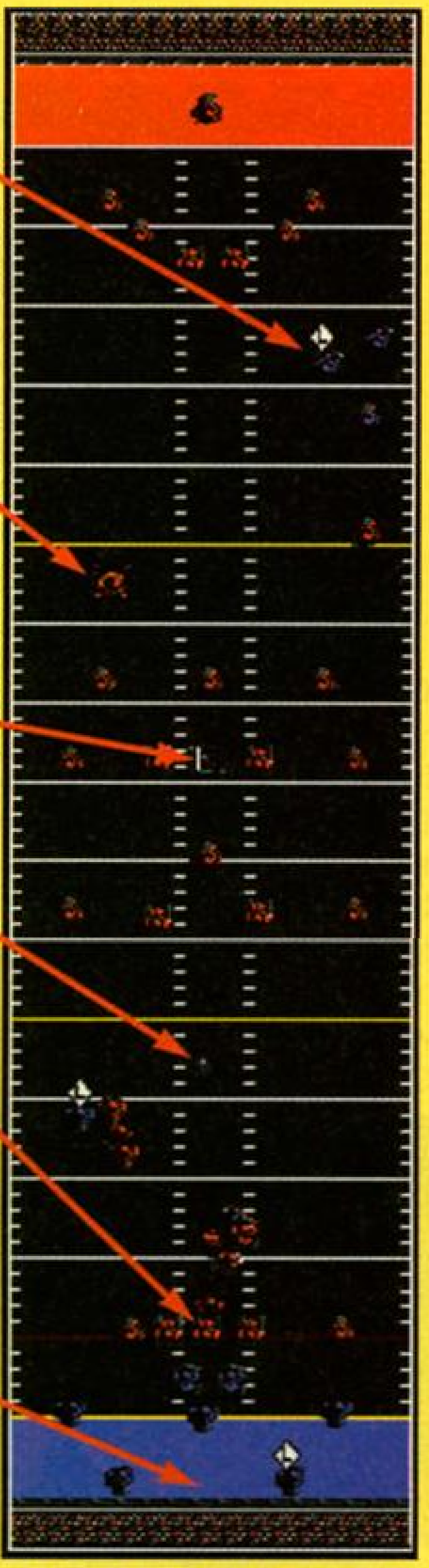
Oo-er, an exploding ball. Just as well no-one was carrying that, they could have got a nasty bruise

Kick off: The ball pops up through a hole in the ground

The ball. There it is. The ball. That's it. There

A conversion attempt. They must have just scored. Blast!

The end zone: This is the area the opponents took the ball into *asecond ago* (to score their *@%! touchdown)



NIGHTBREED

HIT SQUAD • 061-832 6633 • £3.99

This'll be an Ocean movie licence then. Not one of those pick 'n' mix types though, but a proper game. A beat-em-up sort of thing, in which you play a brain-washed psychiatric patient innocent of the crime you've been charged with which your doctor has committed (got that?).

There are a few keys to collect along the way, but mainly the game is about wandering through brightly-coloured fantasy landscapes, trying to avoid various nicely-drawn, nasty-intentioned monsters. 'Trying' is the operative word, since many of the enemies and hazards are impossible not to take hits from – it's just a case of trying to keep the hits to the minimum.

As well as the various monsters, you've also got the whole of the Canadian National Guard after you. They've got guns. They don't intend to read you your rights. The game is fairly repetitive (in common with virtually all beat-em-ups) and quite easy (you progress a fair whack further each time you play). The whole thing follows the plot of the Clive Barker book/film quite faithfully.

Fans of beat-em-ups (sad, sad people) or big Clive Barker afficionados might find something to cheer here. We found it all a bit cheerless though, and we'll gladly despatch our copy of the game to the first person who can write in and tell us how to spell the word 'vapid'.

Original release: March 1991
Original publisher: Ocean
Original score: 78% (AA67)
Today's view: Walk-of-the-mill beat-em-up, with loads of impossible-to-avoid foes and double loads of mindless punching.

AA 43% VERDICT



■ **That black patch on the ground there is a pathway to the second level. (This has been a public information caption.)**



■ **Oh, I don't like the look of him. Most unpleasant. I think I'll just keep my distance if that's all the same with you.**



■ **The second level is a lot better decorated than the first. It's still full of monsters though. (*Gosh, what a surprise – ed.*)**

SILENT SERVICE

KIXX • 021-625 3388 • £3.99

Silent Service is the best submarine simulator ever on the CPC. Truly. Mind you, saying this is roughly akin to saying that the carrot is the best orange vegetable (what others are there – *Hunt for Red October*, er...), but it's very nice to be able to open on a positive note for a change.

The plot: Steer your Yankee sub across the Pacific Ocean, find a Japanese convoy, work out which ship is your target (check the shape in your *Bib Boys' Book of Japanese Destroyers*), sink it, then race home for tea and crumpet, soda and popcorn, or whatever it is that Americans have after sinking a ship.

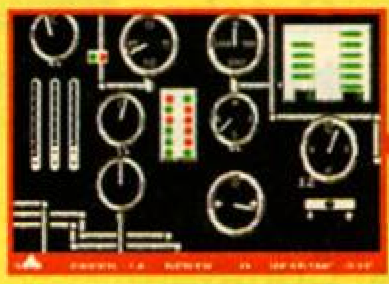
The options: Loads of skill levels (loads = four) and three different types of scenario, one of which is a practice mode. Tip: practice a bit till you've sussed how the torpedos work.

The game: It's not going to have you on the end of your seat, but what simulator would? Though *Silent Service* is a bit daunting at first, you'll get the hang of it sooner or later. There are various different displays for charting position, studying damage, firing torpedos and so on.

The verdict: You can get a bit lost in all the instrumentation, but once you've worked out what's what and gained a grip of what the missions entail, it's... fun. All simulators are phenomenally dull until you get drawn into them, of course. Fortunately, this one's a lot easier to get drawn into than most. *Silent Service* is the only combat simulator to have been banned by the West German (as was) authorities for being too realistic.Crivens!



The scope: Looking through here is a good idea when it comes time to fire a torpedo. Line up the foe and blast away...



The gauges: A whole host of indicators (battery level, fuel, torpedos, etc). Check the inlay for full details.



The conning tower: You can select the various different screens using the function keys, but if you prefer a bit of graphic involvement you can move this little 'man' around using the joystick and press fire when you're at the relevant position.



The bridge: For a bit of fresh air and a wider view of what you're heading towards. Ah, the ocean breeze...



The damage: What's the damage, mate? An at-a-glance guide to the holes that shouldn't be there...



The map: Where are you? Where should you be? Which island looks the sunniest?

Original release: January 1987
Original publisher: MicroProse

Original score: Not reviewed
Today's view: Submarine sims aren't the most exciting of games, but if you're in a sub sim kind of a mood, take note – *Silent Service* is the numero uno.

AA 80% VERDICT

SUPERCARS

GBH • 0742 753423 • £3.99

They love cars, do Gremlin. *Lotus Turbo Esprit, Toyota Celica, Nigel Mansell* this Christmas... it seems that one in every two releases from the Sheffield gang is a drivie. *Supercars* is a bit different to the rest, though. For a start, the screen doesn't show the view through your windscreen.

Supercars is an overhead-viewed race with tiny cars pelting round a twisty turny track. You're controlling one of these cars. The computer is controlling the other three. They twist and turn all over the place (in a twisty turny manner).

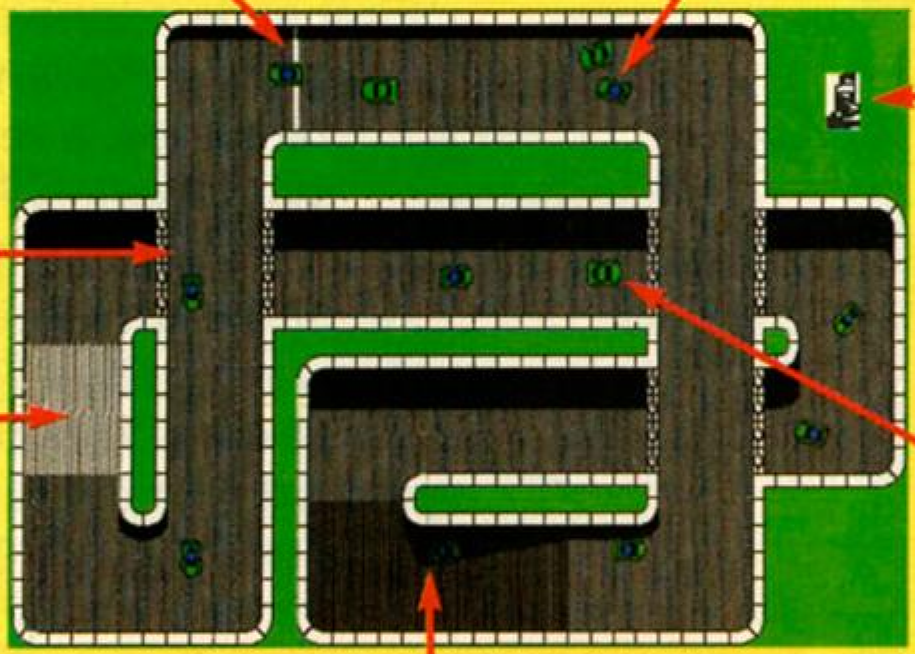
There are nine different tracks, a sales office (for better, less battered cars) and a garage (for increased speed, steering improvements, and, er, weapons). It's hard to describe exactly why the gameplay is so horribly addictive, you'll just have to take our word for it that it is.

Oh OK, here's three reasons: The cars handle brilliantly, with just the right amount of slippage. The tracks look fairly similar, but each requires different tactics if you're to win through. The difficulty level is pitched just right – if you do well on a course, the computer ups the difficulty for the next one you try!

Basically, *Supercars* is an updated version of the old Atari classic *Supersprint* (from the Jupiteraisic period of history). But whilst some 'updated' games are just half-arsed rip-offs (cf a few CodeMasters games we won't mention), *Supercars* is a brilliant and inspired re-working of the theme. And *Supersprint* was a more gnarlsomely addictive game than most to begin with.

If you don't own a copy of *Supercars* you are either very poor or very stupid (*and in either case Adam knows the feeling – ed*). Make amends now. Repent. Throw away your favourite Dizzy game to make room in your tape box for this.

Drivin' or what?



Original release: February 1991
Original publisher: Gremlin
Original score: 87% (AA66)
Today's view: A classic game style that's just as gripping and addictive now as it was in the days of *Supersprint*.

AA 89% VERDICT

AADORADO

It's the brand new soap that most of Britain is talking about, starring Rod Lawton as the bearded and cynical editor, Adam Peters as the spotty anarchist staff writer, Lam Tang as the chain-smoking art editor and Jane Richardson as the whip-cracking general. This month: Farewell to Waring.



How long ago was it that Adam Waring first moved to AAdorado? No-one could quite remember exactly when this hard-drinking gigolo first turned up in the town, having hitched his way from Hull on the back of a sheep truck, with only a copy of *Lost Caves* and a knowing smile to pay his passage with. Adam had been around for so long, he was almost part of the furniture. In fact, for a few weeks during an office move in 1990, editor Rod actually did use him as a makeshift chair.

But now it was all over. Adam had drunk Bath dry, and it was time to move on. There were more lands to be conquered. There was Asia, America, Australia; all out there waiting for the arrival of the northern lothario.

The rest of the residents of AAdorado showed up at Bristol Docks to see Adam off. Strangely, there seemed more grins on faces than tears in eyes. Maryanne handed Adam the present she had bought him, a teddy bear that seemed a bit the worse for wear.

"It was all right when I left work yesterday," Maryanne muttered, "it looks like someone has cut it open and then sown it up again. Some of the stuffing's come out. I don't know what can have happened."

"Oh don't worry," said Adam, kindly, "it's lovely". Rod and the other Adam stifled their laughter and tried to hide their guilty looks, as Adam put the teddy under his arm and buried himself deep in the crate of pilchards. Maryanne and Jane nailed the lid down, and the crate was lifted on to the waiting trawler.

"Good luck with the Malaysian customs office," shouted Spotty Adam from the quayside as Rod fell to floor, rolling around in laughter. Maryanne and Jane looked on in puzzlement. The trawler sailed off in to the sunset. It was the end of an era.

Meanwhile, back at the ranch, the evil brigand Mark Hyum was standing on a table, rubbing his hands in glee, as a crowd of workmen continued the task of boxing off AAdorado from the rest of the world.

No-one noticed anything till the following day. "I'm off for lunch," said Rod, before walking face first into a wall. "Where's the blinking door gone?" Rod, Spotty, Lam and three nearby Spectrum owners looked around in shock. There was no door. There was no way out. They were trapped...

don't miss it!

AMSTRAD ACTION was recently voted Best CPC Monthly Based in Bath by the Institute of Norse Lumberjacks. To celebrate, cut out this coupon and give it to your newsagent:

Dear Newsagent, I know a good magazine when I smell one, so please reserve *Amstrad Action* for me every month, starting with the October issue, which might be out on Thursday 17th September.

My name..

My address...

....

NEXT MONTH

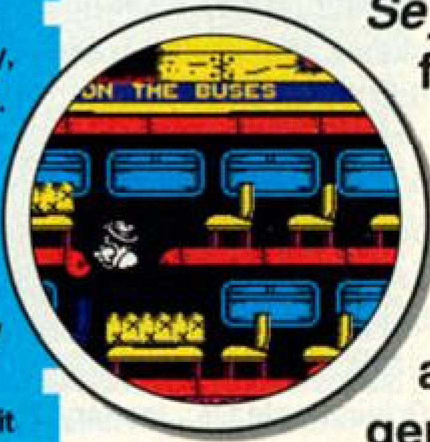
October issue ahoy! All this and more, just four weeks away...

SOUNDS LIKE FUN



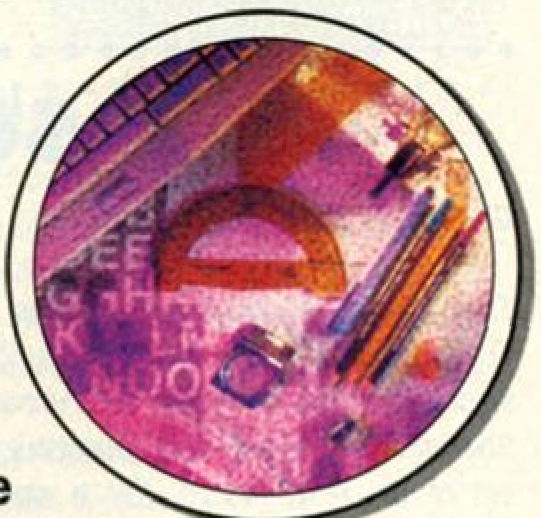
Computerised music is taking over the pop charts, and all thanks to a lovely invention called MIDI. Next month we provide the full SP on making music on your CPC. *Top of the Pops*, here we come...

FINAL APPROACH



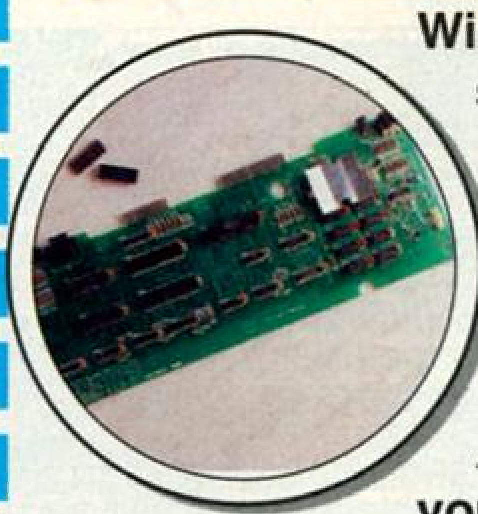
Seymour's Wild West is almost finished. Before Big Red and CodeMasters start putting up the balloons and blowing on squeaky things, *How A Game is Made* drops in on them for another burst of lid-lifting and general jollity...

HOLD THE LAST PAGE



We couldn't find room for the last part of our DTP series this month. Sorry. Tune in next month, though, when we promise all that info on printing and distribution will be yours...

TECHNICALLY SPEAKING

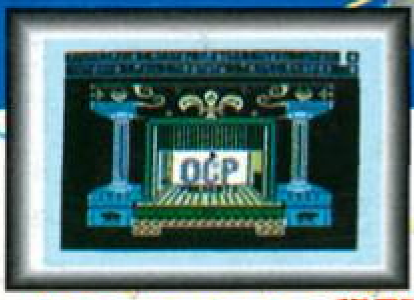


Wireheads – look out for the start of a *PowerPage* tutorial series, a review of *MicroDesign Plus* and the start of a new series on programming languages. Plus *Type-ins*, *Ask Alex*, *Top Tips* and all your other most favourite serious regulars.Golly!

October issue on sale 17th September

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- Create an image - shrink it, expand it, move it, rotate it, copy it, colour it, etc., etc.
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- Zoom in to add detail in fine mode. • Full cut and paste facilities plus excellent printer support.
- Pulldown/Icon driven menus for ease of use. • Mouse operation, plus joystick and keyboard control.
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TAPE OR DISK FOR 464 OR 6128 (PLEASE STATE WHICH REQUIRED) N.B. 464 NEEDS DK'TRONICS 64K RAM PACK

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64K MEMORY EXPANSION

- Simple plug in memory expansion gives instant extra memory.
- Features bank switching software for easy use by the programmer or for use as a data storage area.
- Ideal for use with the CPM 2.2 etc.
- The software also features some extra BASIC commands.
- 64K unit expands 464 to 128K.
- 64K unit brings 464 up to CPC 6128 memory configuration making a much larger software base available. Will work straight off with many programs designed for this unit (including OCP Art Studio - see Ad.).
- Bank switching done automatically by software (cassette 464).

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